Worlds of Authority, Communities of Practice, and State Formation in Early 1st Millennium AD Central Korea

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Abstract

Processes of state formation remain a key topic of debate in archaeology, with linear evolutionary models coming under increasing scrutiny and alternative models of social complexity accompanying these critiques. Studying the transition from Mahan (Late Iron Age; 100 BC – 300 AD) to the Baekje kingdom (Three Kingdoms Period; 300 – 668 AD) in the central part of Korea contributes on both these fronts. Models of state formation in Korea tend towards aforementioned evolutionary schemes, whereby a single chiefdom within the Mahan confederacy expanded outwards to form a territorial state via diplomacy and force.

To test this account this thesis develops a socio-political model of heterarchy based on multiple 'worlds' of what can be called natural or epistemic authority, with authority freely given by autonomous subjects voluntarily subjugating themselves based on situational evaluations of competence. In the first part of this thesis, textual and multi-scalar archaeological analyses (mapping distributions of consumption, storage, and production activities) of settlements in the Han River Basin and Hwaseong Region during the Later Iron Age, reveal that Mahan groups were organized along the principles of situational natural/epistemic authority, with multiple non-mutually exclusive leadership roles.

That Mahan groups had multiple, parallel positions of authority and little indication of permanent social ranks forces a reconsideration of the prevailing accounts concerning Baekje state formation. An analogous multi-scalar investigation into the Early Baekje Period shows a narrowing in the worlds of authority to one specific field of action involving public feasting,

whereby an apparently exclusive community of practice emerged at particular locales, eclipsing the heterogeneity evident in the Later Iron Age. I argue that this exclusive community grew due to certain local leaders taking opportunities to monopolise the exchange of certain goods, particularly those related to long distance trade/diplomatic missions to Mainland China.

However, elements of the heterarchical nature of Mahan persisted, with individual settlements maintaining similar principles of organization. Furthermore, stylistic, petrographic and compositional analyses of prestige Black Burnished Pottery explores whether the production of stylized serving ceramics was rooted locally or under central control. Identifying multiple loci of production indicates that, while local stratification is occurring, Early Baekje itself appears as a voluntary distributed network based on a new category of leader whose authority is grounded within membership of a particular community of practice.

Keywords: state formation, early Korea, Mahan(馬韓)-Bakeje(百濟) transition, socio-political heterarchy, authority

Contents

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Chapter 1

Introduction: Society in Early 1st Millennium AD Central Korea and the need for a re-evaluation

Discussions of bottom-up organizational processes like heterarchy, decentralized, and/or more consultative modes of power have recently become more prevalent among scholars studying complex societies (review by DeMarrais and Earle, 2017). From these perspectives, top-down coercion is de-emphasized as the prime mover in socio-political organization. Instead, interest focuses on why people would choose to pool resources and sovereignty into ruling institutions or the presence of multiple counterbalanced authorities. The concept of heterarchy in particular has a long history within archaeology, often in discussions where evidence for hierarchical social structures is weak and individuals or households had high autonomy (e.g. Crumley, 1987, 2001, 2005; Ehrenreich et al, 1995; Rautman, 1998; S. McIntosh, 1999; R. McIntosh, 2005 DeMarrais, 2013a). Yet in both method and theory heterarchy remains somewhat underdeveloped, so in this thesis I will develop a model of heterarchy that outlines clear expectations for archaeological patterns.

Combining these new theoretical perspectives with new data I will "test" prevailing models for early 1st millennium AD Korea against the alternative of heterarchy. The historical Mahan (馬韓) and Baekje (百濟) societies, situated in central and southwestern Korea, provide a good case study. During the Late Iron Age (100 BC – AD 300) a confederacy of multiple smaller polities expanded from the Han River basin in central Korea down the western region to the southwestern coast (see sections 1-i-ii for more detail). During the fourth century the kingdom of Baekje emerged in the Han River basin, nominally out of one of the smaller Mahan polities (see section 1-i-iii for more detail).

Relevant ancient texts and archeological data provide little grounding for models emphasizing strict socio-political hierarchy during this time period, at least in the case of Mahan. Would heterarchy be a more appropriate concept through which to understand Mahan and Baekje? Was Mahan a confederacy of chiefdoms or was leadership more fluid and open? Did a single chiefly lineage expand over other local polities to form a centralized state of Baekje or did Early Baekje take an alternative form? These are the questions at the heart of this thesis.

State formation processes have been an issue of debate among archaeologists and anthropologists for decades, with evolutionary schemes dominating models until relatively recently; such schemes remain the primary interpretive framework in Korean archaeology. Various concepts of the state have stressed territoriality, the centralization of power and administration, legal codes, the ability to demand labour or tax, and the recognition of an ultimate institutional authority (review by Scheidel, 2013). Often nested within this topic has been the study of chiefdom societies, proposed to be a precursor phase to the emergence of the state by multiple influential scholars (e.g. Service, 1962, 1975; Fried, 1967; Flannary, 1972; Earle, 1987; 1991). Chiefs may take different strategies to gain and maintain authority, emphasizing self-aggrandizement (e.g. accumulation and redistribution of wealth to a small elite retinue) or community representation (e.g. provision of large communal ritual and public works) (Renfrew, 1974; Earle, 1991; Blanton et al, 1996); either way the chief, as a person and as an institution, is envisaged as the ultimate authority. Chiefdoms and states are therefore conceived of as being on a continuum, constituted by similar processes and human tendencies. Both, at different scales, essentially act to centralize and concentrate political authority and power (and often wealth) into few hands.

In both cases some singular power is envisioned, highlighting how ideas about states and

chiefdoms have been biased towards a very particular view of authority and hierarchy. Longstanding concepts regarding sovereignty have entrenched assumptions that any political group must have some supreme authority (Feinman, 2001; also see Chapman, 2007). More expansive power hierarchies have thus come to be linked with increased social complexity (S. McIntosh, 1999; Souvatzi, 2007) (despite the fact that strict hierarchies could be seen as ways to *reduce* the complexity of life and decision-making). Lack of evidence for a central power can thus lead to (erroneously) assuming a concomitant lack of social complexity (also, McIntosh, 2005: 10-16). In addition, overemphasis of vertical relationships and domination can lead to a myopic focus on narrow ranges of evidence (White, 1995); variation and alternative organizational structures thereby become missed or homogenized into pre-existing categories. Evidence for certain types of hierarchies therefore often becomes a proxy for inferring a broader type of socio-political organization.

These same lines of thought also dominate in Korean archaeology, the region under discussion in this thesis. Evolutionary sequences and their attendant categories are a particularly prevalent frame through which state formation processes are interpreted, with the development of chiefdoms into highly centralized states a common theme. Parallel to such approaches is a prevailing emphasis on cultural diffusionism, which implicitly positions past Korean cultures as passive receivers of culture from China/Japan rather than dynamic in their own right (Pai, 2000; Kim, 2002; Blackmore, 2019). This latter point may be one reason that Korean archaeology remains critically underrepresented in the wider literature[1]. Korean "chiefs" are thereby seen to have either emulated the Chinese state while absorbing its culture,

[1] A relative lack of both English speakers that can operate in Korean and Korean scholars that publish in English are also significant.

or were replaced by migrants from pre-existing state societies. Yet, the applicability of evolutionary schema to prehistoric or proto-historic Korea has been questioned (Nelson, 1993: 10), and the explosion of data since the late 1990s (see Shoda, 2008) allows a finer grained testing of prevailing models and novel theoretical and/or methodological approaches to be taken[2].

Recent critiques of chiefdom/state concepts and evolutionary sequences have stressed the wide variation in past polities' socio-political organization, arguing that overly broad typologies reify a narrow range of features while obscuring much human action (e.g. A. Smith, 2003; Yoffee, 2005; Joyce, 2010). Instead, local histories, specific processes of authority (re)production, and alternative modes of social organization are emphasized. Existing traditions, spaces, and ideological/conceptual frames of reference have their own histories, and are the medium of change (Pauketat, 2001, 2007; Smith, 2003; Routledge, 2014). Further, a focus on how political communities came to be and how socio-political authority was constituted offers both a richer picture of the past, inclusive of all actors, and greater explanatory power regarding change and stability (Smith, 2003; Yoffee, 2005; Campbell, 2009). Finally, as noted, recent work investigating bottom-up organizational processes are reformulating ideas on the reasons people aggregate and form social institutions.

The remainder of this introduction will provide more background on early Korea, discuss the need for a re-consideration of Mahan and Baekje socio-political organization in more depth, and lay out the overall structure of this thesis.

[2] I have previously recommended a focus on identifying spacio-temporal distributions and transformations of social institutions and practices (Blackmore, 2019).

1-i – Korea in the Early 1st Millennium AD: the Late Iron Age and Early Three Kingdoms Period

The early 1st millennium covers two broad proto-historic/historic periods in Korea, the Late Iron Age (100 BC – AD 300) and the early part of the Three Kingdoms Period (AD 300-668), seeing the development of the peninsula's first states (Table 1-1). The Late Iron Age (LIA) is also referred to as the Proto-Three Kingdoms Period or the Samhan Period; the former as a teleological reference to the later period, and the latter is named after polities appearing in historical texts at this time (reviews of period nomenclature by Barnes, 2001: 80-90; Ju, 2009: 114-117). I use LIA here because it is the most inclusive of all peninsular groups and polities.

Bronze Age	Early Iron Age	Late Iron Age	Three Kingdoms Period
1500-300 BC	300-100 BC	100 BC – AD 300	AD 300 - 668

Table 1-1: Chronology of southern Korea; key periods under discussion in this thesis are highlighted.

1-i-i: Korea's Geography and Geology

The geography of the Korean peninsula has certainly influenced the socio-political histories of early Korean polities, with the complex polities of the Three Kingdoms Period all centered on major rivers. Around 70% of the peninsula is mountainous, with a foundational geology of primarily pre-Cambrian gneisses and schists overlain by various later formations, including significant outcrops of granite (D-S. Lee, 1988). Most rivers therefore occupy small and narrow plains, which only open out near the coast (Lee, 1988: 9). The primary river system

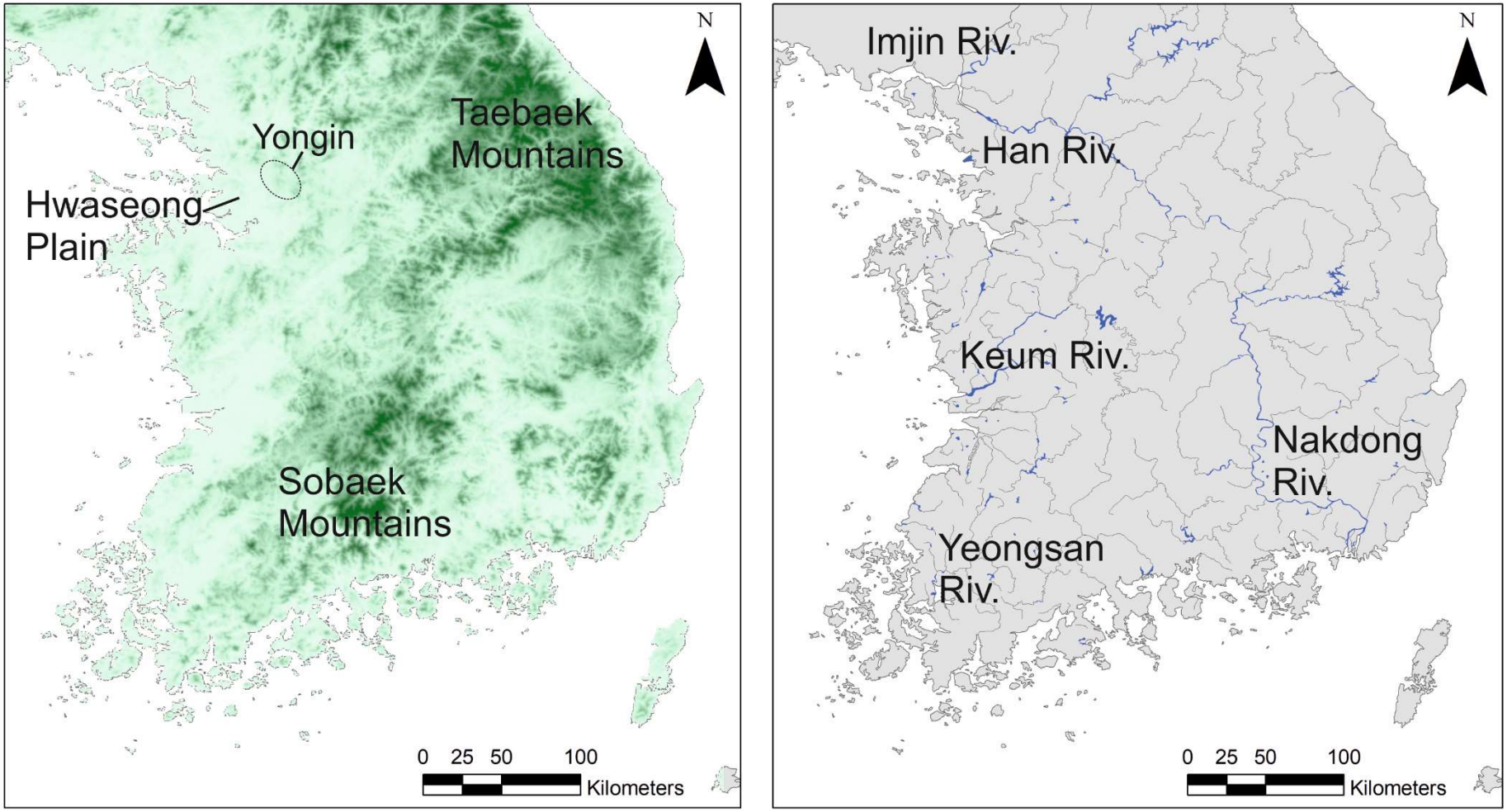

Figure 1-1: Important geographic features of the southern Korean peninsula; left - relevant topographic features, right – major rivers.

pertaining to this study is that of the Han River, although most major rivers were important sites of human settlement (Fig. 1-1). These rivers and their watersheds offered wide traversable networks and natural boundaries to past human communities, connecting and bounding populations occupying the relatively isolated and defensible valley plains.

1-i-ii: The Late Iron Age

The LIA was a dynamic period on the Korean peninsula, characterized by the presence of multiple local groups and polities alongside militarized outposts of Han (漢) Dynasty China in the northern regions (Fig. 1-2). This period is commonly taken to have begun in 100 BC (Korean Archaeological Society, 2007: 155), following the 108 BC invasion of the Wiman Joseon polity by Han China, after which the military and administrative commandery of Lelang 樂浪 was established near modern day Pyongyang[3]. The presence of Lelang impacted the dynamics of communities elsewhere on the peninsula, providing a contact point with Imperial Chinese authorities and thus offering access to Chinese items and titles (Pai, 1992, 2000; Barnes 2001, 2015; S. Lee, 2013). A further commandery, Daifang 帶方, was set up in the late 2nd – early 3rd century as a specific point of contact for polities in the southern part of the peninsula following a period of internal unrest and conflict with peninsular groups (Y. Oh, 2013).

[3] Five other commanderies were set up at various times and places before AD 0, but most were abandoned within a few years (see Byington, 2013a; O-J. Kwon, 2013).

Figure 1-2: Important groups and polities of the Korean Peninsula during the Late Iron Age

Authorities at Lelang are recorded to have diplomatic and exchange relations with various communities on the peninsula[4]. Most important to the present thesis is Mahan, one of three "Han 韓" groups noted as being present in the southern part of Korea. Mahan was said to

[4] Relevant key texts are the 3rd century *Sangouzhi* (三國志) and the 5th century *Hou Han Shu* (後漢書).

occupy the southwest region, and was constituted by over 50 individual polities (with the other two Han groups, Jinhan 辰韓 and Byeonhan 弁韓, having 12 polities each). However, other than a list of names there is no specific information on the vast majority of such polities. Various native titles of leadership or authority are noted, and polities appear to have been more-or-less autonomous in their interactions with the Chinese authorities and with each other.

Over the course of the LIA a greater distinction in people's subsistence strategies and preferred material styles gradually emerged, along with noticeable differences in the intensity of some communities' relationships with Lelang. Ceramic styles, pastes, and manufacturing methods were regionally variable (Korean Archaeological Society, 2007), and evidence indicates broad craft specialization emerged across Korea in the latter part of the period (J. Choi, 2008: 170-4). In the northern part of Mahan, in the Han River basin, artisans continued to make plain earthenware alongside new styles of grey or red paddled pottery (S-b. Park, 2001a; J. Kim and J. Kim 2016), whereas in the southwest potters predominantly made grey/red wares right from start of the LIA (J. Kim, 2009; 2012). Plain greywares, sometimes labelled as "porcelain-like pottery" (Choi, 2008: 174), were also made by some artisans in the LIA, but become far more widespread in the Three Kingdoms Period.

Burials varied both between and within regions, with various types of wooden coffin, ceramic coffin, wooden chamber, and cist burial traditions coexisting in southern Korea (O-Y. Kwon, 2009; 2015). People inhabiting different Mahan areas also created distinct burial traditions, seemingly following the major central and southwestern watersheds; wooden coffins at the Han River, wooden coffins with ditch enclosures at the Keum River, and both wooden and ceramic coffins were buried at sites along the Yongsan River (Kwon, 2015). Throughout the LIA however, people also began to construct various forms of earth/stone mound tombs all

over southern Korea.

Hamlets and villages were relatively small in size during the LIA, with even the largest having fewer than 50 households. Only after AD 200 did people start to aggregate into larger settlements, some encompassing perhaps 500-1000 co-existing households (J. Park et al, 2017; M. Kim et al, 2019). Subsistence strategies were also diverse, with the inhabitants of different regions or watersheds favouring particular crops. A distinction between the northern and southern parts of Mahan is again visible, with the former focused on millets and beans and the latter on rice (S. Ahn, 2013). In west-central and southern areas field and irrigation systems expanded from the 3rd century onwards (H. Yi, 2009a; H-w. Lee, 2011; M. Kim et al, 2019)

Finally, it was communities in the southeast that interacted most frequently with Lelang, if concentrations of Chinese items can be taken as a proxy (Barnes, 2015: 319). Mahan areas show an extreme paucity of Lelang items by comparison (S-b. Park, 2001b). However, relatively high concentrations of Chinese style goods have been identified in the eastern part of the central region on either side of the Taebaek mountains (Sim, 2007; I. Kim, 2009: 160-170). This region is usually seen as having been occupied by non-Han cultures with affinity to northern peninsular and coastal Siberian cultures (see Blackmore, 2019). The east coast was also the likely site of one short lived Han Chinese commandery, and populations “east of the mountains” are recorded as under Lelang control in a commandery census dated to 45 BC (Byington, 2013a: 308-312).

1-i-iii: The Three Kingdoms Period

The Three Kingdoms Period saw the emergence and development of more centralized political authorities in the form of the Baekje, Silla (新羅), and Goguryeo (高句麗) states

(Fig. 1-3); although the latter's history extended back to the LIA (H. Kang, 2008). These three kingdoms engaged in conflict and diplomacy among both themselves and actors in the wider region over centuries, predominantly with Chinese dynasties and the developing Japanese Yamato court. In the early 4th century Lelang was conquered by Goguryeo, removing any direct vestige of Chinese authority from the peninsula. In addition, two largely autonomous groups occupied the far south and southwestern regions, polities often obscured by the focus on the "Three Kingdoms". The first was Gaya (伽倻), a confederation of smaller polities occupying the western side of the Nakdong River. The other was a probable remnant of Mahan, which persisted in the southwestern corner of the peninsula until at least the 5th century, centered on the Yeongsan River (O-Y. Kwon, 2008; 2015).

During the latter part of the LIA and the start of the Three Kingdoms Period, a mounded tomb culture emerged and spread across the peninsula, typified by stone/earthen mound tombs and stone step-tombs (Barnes, 2015). Such tombs indicate accelerating social stratification and the glorification of particular individuals and/or lineages as power became invested in unitary authorities. The adoption of foundation myths emphasizing the supernatural roots of ruling families also highlights these processes (Noh, 2004; Byington, 2016: 244-9, 264-77; Müller, 2018). Accompanying and facilitating these developments was the growth of literacy, record-keeping, and the adaptation of particular forms of Chinese governance traditions (Best, 2006). Widespread fortress building also reflected new administrative strategies and endemic conflict among peninsular polities; indeed, authors tend to use the emergence of fortresses as indicative of the emergence of the state (e.g. Kwon, 2008; S-b. Park, 2010).

1-i-iv: Baekje

Baekje, the polity of interest in this thesis, emerged in the Han River basin as a formation

distinct from the preceding LIA communities in the late-3rd to early-4th century AD (Park, 2001a; Kwon, 2008; Barnes, 2015: 335-6). An 11th century Korean text, the *Samguk Sagi* 三國史記 (Records of the Three Kingdoms) placed Baekje's foundation at 18 BC. However the existence of a state at this date is not corroborated by contemporary textual or archaeological evidence (Barnes, 2001: 35-6; Best, 2006). The archaeological chronology will thus be used here. Due to the similarity in the characters used for the name, Baekje is commonly held as having developed from the polity of "Baekje" or "Paeje" (伯濟), listed in Chinese records pertaining to Mahan (e.g. Gardiner, 1969; Park, 2001a: 82; Best, 2006: 22-3; Barnes, 2001, 2015: 335).

The earliest phase of Baekje was centered on Pungnab fortress (accompanied by a sister fortress of Mongchon, built in the later 4th century), located on the Han River (Fig. 1-3). This early period is often referred to as the Hanseong (Kr: 한성) Baekje Period (Table 1-2), after the Baekje capital noted in historical texts. However, since it cannot be assumed that Hanseong was synonymous with Pungnab from the very earliest phases, the term Early Baekje will be adopted here.

S-b. Park (2007) highlighted an area of around 30km radius as the core of Early Baekje that constituted a "confederate kingdom (Kr: 연맹왕국 聯盟王國)" led by authorities at Pungnab fortress (also Park, 2001a). I thus chose to centre the present study around this area. Distinctive ceramic styles accompany the emergence of Baekje in this region, including stylized greyware for serving/consuming food and black burnished pottery (jars and serving vessels), the latter of which has historically been associated with the Baekje elite (S-b. Park, 1992, 2001a; Choi, 2008). Imported ceramics from China, Japan and other regions of Korea also abound within Pungnab fortress (O-Y. Kwon, 2002; 2008). Finally, as in other areas of Korea, mound and step tombs were built throughout the 4th century, culminating in relatively

large stone step-pyramids adjacent to Pungnab fortress.

Figure 1-3: Important groups and polities of the Korean Peninsula during the Three Kingdoms Period

Material and textual evidence indicates close relationships between the Baekje court and Southern Dynasties in China, and with the Japanese/Yamato court (also Hirano, 1977; Best, 2006; D. Lee, 2019). More secure textual accounts do not appear until the late 4th century,

when records of Baekje contact with courts in China and Japan appear and the *Samguk Sagi* accounts become more anchored by other histories (see Best, 2006: 63-74). By the 5th century a bureaucratic system headed by a king or royal house can be safely assumed. For this reason I have divided the Early Baekje Period into Proto-Historic and Historic periods (Table 1-2), to reflect the fact that a centralized government is clearly in evidence after AD 400.

Hanseong / Early Baekje	**Ungjin Baekje**	**Sabi Baekje**
AD c.250 – 475	AD 476 – 538	AD 538 – 660

Proto-Historic Early Baekje (AD 250 – 400)	Historic Early Baekje (AD 400 - 475)

Table 1-2: The three core periods of Baekje (above) and periodization of Hanseong / Early Baekje (below)

Baekje history extended through three periods (Table 1-2), ending in AD 660, when it was conquered by combined Silla and Chinese armies. From the 5th century Baekje material styles (including ceramics and gold or gilt-bronze crowns/shoes) extend into the Keum River basin, indicating alliances between the Baekje authorities and local leaders to their south (Park, 2007, 2010; Kwon, 2008). In AD 476 the Baekje capital was moved to Ungjin (modern day Gongju) in the Keum River basin following the loss of Hanseong to Goguryeo armies in AD 475.

1-ii – Prevailing Models of Mahan and Baekje: hierarchy and the sovereign

Prevailing models of Mahan and Baekje socio-political organization are classical top-down models of chiefdoms and states, whereby authority was invested in a sovereign chief/ruler who sat at the apex of a centralized hierarchy. Indeed, until the 1980s-1990s the various Mahan polities were assumed to have each been states due to the use of the term 'state' (國) by Chinese chroniclers (Barnes, 2001: 3-6). The lack of archaeological evidence for state societies during the LIA has led to Mahan polities to be referred to as statelets or chiefdoms. Conceptions of Mahan polities were thus simply moved one evolutionary level backwards without a critical examination of how LIA society actually operated. References to Mahan leadership titles in the historical texts have therefore also been interpreted as referring to sovereign chiefs. Even when issues like the foundations of social authority are addressed (e.g. Barnes, 1986, 2001; Pai, 1992, 2000; O-Y. Kwon, 1995; Park, 2001b; H. Yi, 2009b; H-j. Lee, 2012), implicit acceptance that polities were classical chiefdoms remains.

What White (1995: 103) once called "chiefdom language" prompts a somewhat myopic focus on vertical power relations and complexity as measured by the depth of social or settlement hierarchies (also McGuire, 1983; McIntosh, 1999; Cumming, 2016), assuming that such hierarchy should exist as a given (Potter and King, 1995: 18). However, assuming the natural existence of power hierarchy means you are almost assured to find it; ranking on perceived richness or size will inevitably create a hierarchy of one shape or another. In an influential paper, H-j Lee (2000) used cemeteries as a proxy for settlements to propose a hierarchy whereby the largest and richest burial sites demonstrated the presence of a polity's capital town (also see Kwon, 1995). Park (2001a) takes a similar approach to LIA and Early Baekje cemeteries, assuming that richer cemeteries indicate communities that dominated poorer ones. Similarly, Song (2010) argues for a settlement power hierarchy, whereby the presence of

particular architectural styles (even just one or two examples) indicates a village or hamlet's 'rank', effectively regardless of other material culture.

All such studies rank burials or houses along a single axis of variation and then assume that those ranks coincided with past authority relationships. Yet for much of the LIA the basic units of socio-political differentiation and organization remain unclear (Davey 2019: 127). One-to-one linkage between a particular settlement and a particular cemetery is a problematic assumption (Hodder, 1980). If lineage was the salient factor influencing the site of a deceased's burial then the dead would likely come from disparate settlements. Finally, spatial relations both within and among sites are often almost completely overlooked. Apical chiefly lineages are assumed rather than demonstrated through contextual analysis of cemetery sites.

The vision of chiefs sitting at the apex of a political formation reinforces the idea that these individuals and lineages resided at the apex of authority relations, as sovereigns. For example, Mahan ritual leaders described in Chinese texts are assumed by some scholars to have been be adjuncts of the chief (e.g. Yi, 2009b: 35), even though no statement to that effect appears. Expectations for the archaeological material are also filtered through such a lens. Hee-joon Lee (2012: 75) charts differences in the contents of "representative chieftain burials" to track changes in the basis of authority from the Bronze Age to the LIA. Yet the justification of what constitutes such a burial is circular, chiefs are assumed to have had the richest burials and therefore the richest burials belong to chiefs (a similar point applies to the use of fortresses as indicators of the state – e.g. Park, 2001a, 2010; Kwon, 2008). Finally, even when the probable weakness of chiefly authority is noted (e.g. Yi, 2009b: 51), primary assumptions of the chiefdom model remain untouched.

Peer-polity models have been offered as something of an alternative to evolutionary

sequences (e.g. Barnes, 1986, 2001; Pai, 1992, 2000), however such approaches retain some of the same problematic elements. Peer-polity models maintain the chiefdom as the core unit of interest; a hierarchical and territorial socio-political formation. Horizontal relationships among such units are examined but the constitution of the units themselves remains something of a black-box (Potter and King 1995). Assumptions of bounded territorial units are also explicit in studies delineating settlement hierarchies (e.g. Lee, 2000) or the geographical locations of particular statelets (e.g. S-o. Kim, 2014).

Similar understandings characterize approaches to Baekje state formation and form. For example, Soon-bal Park (2001a: 34-9) explicitly outlines an evolutionary model whereby each chief became the head of a noble house within the Baekje kingdom. Ultimate authority thus rested with the royal house. Oh-Young Kwon (2008) also sees the early Baekje centre as the seat of central government headed by a king (also Park, 2010); this government was thus the main actor allying with and integrating regional chiefs in an outwards territorial expansion. However states do not simply sit on top of chiefdom organizations, just adding one more segmentary level of control, but undergo wholesale reconfigurations, where multiple interest groups had competing and diverse power bases (Yoffee, 1993). States are ongoing processes (McGuire, 1983; Routledge, 2014); modelling them as a hierarchy of hierarchies eclipses any possible nuance and complexity, heavily restricting interpretations of the archaeological evidence.

Common critiques of classical chiefdom/state and evolutionary stage models are thus applicable to prevailing understandings of early 1st Millennium Korea. For example, much research effort has gone into identifying and understanding the activities of perceived chieftains/elites, with little concern showed for the rest of the population. Non-elites are left faceless and powerless, their activities having no real impact on the actions of elites (Pauketat,

2000, 2001; Blanton and Fargher, 2008; Joyce, 2010). Although scholars have developed approaches for examining everyday life (e.g. M.L. Smith, 2010; Robin 2013), in discussions of Mahan and Baekje the polity ends up treated as a totality, with elites in total power (also see Smith, 2003; Routledge, 2014).

Ideologies and the internal workings of these communities, which are crucial to understanding polity formation and maintenance (McGuire, 1983; Yoffee, 2005; Campbell, 2009), have been commonly overlooked because the forms of chiefdoms/states are assumed to be broadly stable in space and time. The types became more real than the past people and communities under study (Smith, 2003: 40). History, space, and place were relegated to become backdrops for political action despite these factors being utterly integral to the values and structure of any given political community (Barrett, 1994; Smith, 2003; Pauketat, 2001, 2007).

Many of these critiques have been addressed in the Anglosphere. Emphasis has shifted towards identifying the social processes and multiple possible pathways to and foundations of social power (e.g. Feinman and Marcus, 1998; Feinman, 2001; Inomata, 2006; Barnes, 2007; Blanton and Fargher, 2008, 2016; Routledge, 2014; Earle and Spriggs, 2015). The way these processes shape and are facilitated by certain layouts and uses of space have also been considered (e.g. Smith, 2003; Blanton and Fargher, 2008, 2016). The implications of having multiple competing interest groups or more consensus based decision-making are topics of concern (e.g. Yoffee, 2005, 2016; Blanton and Fargher, 2016; Green, 2018). The fact that many early polities were relatively fragile, whereby larger polities were difficult to form and sustain, has also been discussed (e.g. Marcus, 1998; Wright 2006). However in Korean archaeology these perspectives have not yet significantly penetrated models of past social organization or state formation.

Evolutionary approaches have been compatible with the diffusionist models of culture that dominate in Korea because such approaches tend generally to posit change as exogenous (Pauketat, 2001: 84). Han China and Lelang have, for good reason, been highlighted as the main actors stimulating the development of southern Korean polities (Barnes, 1986, 2001, 2015; Pai, 1992, 2000; Park, 2001b; Yi, 2009b)[5]. Significant contact between the various southern polities and Chinese authorities is evidenced both by the distribution of Chinese items (e.g. bronze mirrors, ceramics) and via textual records of Chinese titles and their associated official paraphernalia having been granted to local leaders. However, the local meanings and uses of such items or titles are often radically different to those intended by the imperial or state authorities granting them (Scott, 2009; 2017). Indeed, the individuals such authorities identify as leaders, or who identify themselves as leaders, do not necessarily have much influence or act as proxies for others (Scott, 2009: 208-13). Without close investigation of the meanings and uses of such items in local context the significance of such items is merely assumed, and often privileges the perspectives of the state authority rather than the local communities.

Alternative approaches to Baekje state formation have been explored by both Daeyoun Cho (2006) and Minkoo Kim et al (2016), who examine ceramic production and feasting activities in Early Baekje. Competitive production of tableware and subsequent communal food sharing are argued as means for social distinction and the reproduction of relations pertaining to the state or existing social hierarchies. The emphasis remains primarily on the activities of the elite, although Cho (2006) does suggest that the significance of feasting and the associated

[5] The importance of interactions with the northern steppe and around the East Sea/Sea of Japan have also been recently highlighted (Seyock, 2014; Blackmore, 2019).

material culture may have been different away from the centre. These studies also touch on the issue of the state as a process rather than an event, something that is created through people's actions and requires constant maintenance. In particular, Cho (2006) reveals that the production organization of Baekje pottery was not radically different from the LIA, remaining dispersed and local rather than under any central control. However, hierarchy remains the lens through which these processes are viewed, either the reproduction of existing hierarchy or competition among the heads of various local hierarchies.

Various authors have discussed alternatives to the use of evolutionary categories and sequences, often emphasizing the genealogies of practice involved in reproducing authority (e.g. Campbell, 2009; Joyce, 2010; Routledge, 2014) or the processes through which interest groups differentiated and interacted (e.g. Yoffee, 2005; Chapman, 2007). Alternatives to top-down hierarchical concepts of authority and socio-political organization have also been explored, including heterarchy (e.g. Crumley, 1995, 2001, 2007; McIntosh, 2005; DeMarrais, 2013a) and collective action theory (e.g. Blanton and Fargher, 2008; 2016). Such studies focus on bottom-up processes, taking the emphasis towards either autonomous horizontal relationships and situational ranking or rational actors in negotiation and exchange with their sovereign authorities. These approaches agree that complex societies/states cannot satisfactorily all be slotted into broad categories; and that investigation of the processes through which polities came to be offers a richer view of the past that tacks more closely to peoples' lives and practices.

1-iii – Research Questions, Approach, and Thesis Outline: testing the idea of heterarchy and its implications for state formation

In this thesis I will develop and explore the idea of socio-political heterarchy as an alternative

to prevailing hierarchical chiefdom/state models for central Korea. Was Mahan a heterarchy? Horizontal relationships among Mahan polities have been considered previously through peer-polity approaches, but was the internal organization of Mahan groups similarly decentralized? If Mahan polities were not in fact classical chiefdoms then the narrative of Baekje's emergence will also need a radical reconsideration. A heterarchical Mahan society would indicate a very different starting point for the development of Baekje, and therefore the social processes and the strategies available to the emergent Baekje leadership would have been equally different.

Heterarchy offers a view of decentralized complexity, where authority is situational and multi-centric and people have high autonomy to forge their own social relationships. Contrasting expectations for archaeological patterns thus follow; for example, multiple (possibly specialized) equivalent centres of activity, graded social distinctions rather than identifiable ranks, a high prevalence of meeting spaces (at multiple scales), and high variation/individuation in craft goods. Hierarchical chiefdom/state models can therefore be tested against a heterarchical model through detailed analyses of the archaeological material.

The next chapter (Ch. 2) will review ideas of heterarchy from a wide range of academic disciplines in order to distil out its main features. From there, the organization of what I term socio-political heterarchies is outlined and expectations for their archaeological patterns are subsequently delineated. Chapter 3 re-examines the textual evidence pertaining to Mahan, focusing heavily on the accounts in the *Sanguozhi*. In it, I eschew evolutionary assumptions and offer a reinterpretation of Mahan polities' social organization from a standpoint open to alternative forms of social complexity, like heterarchy. Chapters 4 and 5 offer a multi-scalar analysis of settlements in the Han River and Hwaseong regions during the LIA and Early Baekje Period respectively. On both the regional (among settlements) and site (among

households/household clusters) levels the distributions of authority symbols, feasting, storage, and production are considered in relations to the expectations of heterarchy and hierarchy. Chapter 6 narrows the focus onto the production patterns of black burnished pottery (BBP), a key ceramic ware associated with the Baekje leadership. The idea that BBP production and distribution was heavily centralized into state hands is strong, and I will test that assumption through petrographic and compositional analyses of BBP samples from throughout the study area. Finally, Chapter 7 offers a synthesis that stresses the multiple pathways to social authority within Mahan and presents an alternative model of Baekje's emergence, while conclusions and future directions are discussed in Chapter 8.

Chapter 2

Heterarchy and its Archaeological Correlates

Before investigating the development of Mahan polities and the Baekje state, a discussion of what heterarchy is, how it operates, and the archaeological patterns heterarchies produce is required. Firstly though, suggesting heterarchical organization as an 'alternative' to evolutionary schemes is not to posit heterarchy as in 'opposition' (dialectical or otherwise) to hierarchy, as others have done (e.g. Crumley, 1987, 2005; Kradin, 2011). As discussed in detail below, heterarchical principles facilitate temporary, situational, and voluntary hierarchies. The question is therefore not only whether Mahan was a heterarchy, but whether heterarchy was a dominant organizing principle, and in what social and political arenas it operated. As Rautman (1998) noted, concern should be focused upon the areas of social action within which heterarchy operated, i.e. on socio-political process.

This chapter offers a review of current understandings and usages of the heterarchy concept from across academic disciplines and builds a model of what I have termed 'socio-political heterarchy'. The review highlights seven core features of heterarchy, which then supports a detailed exposition of how socio-political heterarchy operates through fundamental first principles such as natural (or epistemic) authority, autonomy, and situational frameworks of value. Finally, the archaeological patterns that socio-political heterarchy would be expected to produce are described and justified.

2-i – Current Understandings of Heterarchy

The concept of heterarchy is salient in a variety of disciplines, including the human sciences, humanities, and physical sciences like life and cognitive science. Other work, most clearly in archaeology and management studies, addresses very similar themes to heterarchy without

explicitly invoking the concept. There is thus an appetite for developing models of non-hierarchical modes of social organization.

The term heterarchy originates from the work of neuroscientist Warren McCulloch (1945), who identified circuits among "dromes" in the nervous system that lacked a singular dominant value or preference. He labelled such systems as having a "heterarchy of values" (p. 93). Circularity in preferences means that values lie on a plane, or flat (see Fig. 2-1); the end point of the circuit is therefore unpredictable. In contrast, McCulloch (1945) notes, a hierarchy of preferences will always result in the same end. The systemic lack of a universally paramount value is therefore the foundational feature of heterarchy.

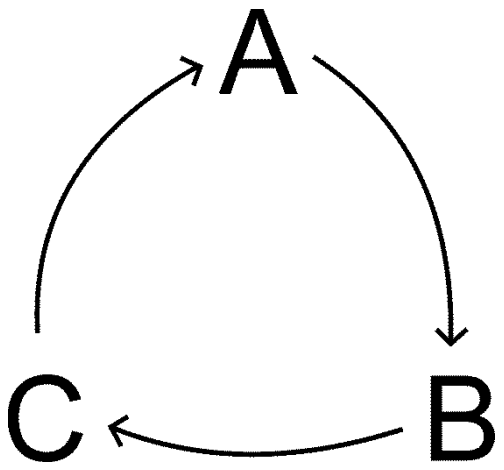

Figure 2-1: An idealized version of McCulloch's (1945) "heterarchy of values"; where A is preferred over B, B is preferred over C, and C is preferred over A.

The heterarchy concept first appeared in archaeology in Carole Crumley's (1979) regional heterarchy model, offered as an alternative to gravity and central place models of settlement patterns, particularly with regard to Celtic and Roman period Burgundy (also Crumley 1987). However use of the term really took off after the 1995 edited volume by Ehrenreich et al, wherein heterarchy was more clearly defined and a wide array of case studies set out. In that volume and since heterarchy has been suggested as the form of social organization in regions

or periods where conventional indicators of hierarchy are seen as weak; most commonly in Africa (S. McIntosh 1999; R. McIntosh, 2000; 2005; Chirikure et al, 2018), south Asia (Zagrell, 1995; Green, 2018), and various parts of the Americas (Rogers, 1995; Potter and King, 1995; Joyce and Hendon, 2000; Mehrer, 2000; Conlee, 2004; DeMarrais, 2013). The concept's largest influence has been on prehistoric studies, where the archaeological data is left to speak for itself and does not fit traditional molds (although there are exceptions, e.g. Wailes, 1995).

An in depth review of work stemming from McCulloch's (1945) characterization of heterarchy reveals that seven core themes percolate through the literature. These are (i) multidimensionality, (ii) multi- or poly-centricity, (iii) situational evaluation, ranking and self-reference, (iv) decentralization, or network horizontality, (v) autonomy, (vi) interdependence, and (vii) system flexibility/adaptability. Many of these features are developed from the premise that the lack of a single paramount value results in a multiplicity of values, each of whose dominance is contextually dependent. Discussions of these seven themes will therefore often overlap and interpenetrate, yet specific emphases vary based on disciplinary concerns and the research questions addressed. Such variability inevitably results in disagreements or contradictions among authors, and certainly not all authors identify or highlight all of the seven themes discussed here. However these features are all broadly compatible, and provide a foundation for understanding and developing heterarchy as a model.

2-i-i – Multidimensionality

The multidimensional aspects of heterarchy relate to some system simultaneously holding either multiple types of (potentially) 'paramount' value or the co-existence of a variety of

organizing principles. Ogilvy (1977), arguing against a simple reduction of the self to 'ego', outlines that in a hierarchical conception the individual is one-dimensional, filling one specialized position (p.7). In contrast is the 'intrapersonal heterarchy' (p.314), where a plurality of core values within the self allows for the possibility of several orders depending on context, a many-dimensional self. There is thus no 'highest' value (also Hofstadter, 1979: 133-4). Ogilvy (2002: 145-8) expands on this thesis in a discussion of institutional organization. Again, heterarchical organization entails "a pluralism of first principles" (p.147), whereby different principal values play central organizing roles in different situations.

In a similar vein, Bruni and Giorgi (2015) contrast hierarchy and heterarchy with reference to cognition and decision-making. Unlike a hierarchy, a heterarchical process has synchronicity, whereby two values can be presented or compared simultaneously rather than one after the other (p.484-486). No consistent optimal value or choice can therefore be identified and the value system is multidimensional (although they do not use the term specifically).

Hedlund (1993) has argued that heterarchy rests upon the ordering of workers or segments along three main dimensions, (i) knowledge, (ii) action, and (iii) position of authority. No dimension acts as a consistent superordinate organizing principle in all settings (also see Hedlund, 1986; Sölvell and Zander, 1995). Stark (2001; 2009) builds upon this work to propose that heterarchy is founded upon a heterogeneity of value frames and organizational criteria (see more below).

In a radically different context, the archaeology of Niger, R. McIntosh (2000; 2005) proposes something similar. He characterizes the social organization of this region as having been made up of multiple autonomous yet overlapping spheres of authority, mediated by group or individual reputation and occult knowledge. These multiple spheres of authority would imply

multiple axes of value, each relating to different specialist activities (ritual, different types of craftwork, hunting etc.). Each activity has a different framework through which to evaluate a person's 'reputation', and thus whether they may be trusted, deferred to, or whether their claims to particular rights are valid.

2-i-ii – Multi- or Poly-centricity

The multi- or poly-centric nature of heterarchy has been highlighted extensively in both the archaeological and organization/governance studies fields. In contrast to multidimensionality, which relates to values or principles, multi-centricity is where multiple individual actors or organizational/institutional units work in parallel, none being ultimately dominant. Various authors have thus characterized heterarchy as being the existence of multiple relatively equal hierarchies or corporate groups (e.g. McIntosh, 1999; Hanson, 2009; Petrie, 2013; Yoffee, 2016). Each hierarchical unit has its own fields of action and rules; for example the various separate hierarchies in Early Medieval Ireland (the landed nobility, the clergy, specialist classes like bards and physicians, and craft specialists), each with their own laws, ranking systems and fields of action (Wailes, 1995). A similar situation may have been the case in Mahan (see Ch. 3, Ch. 7-i). R. McIntosh (2005: 44) likens this situation to one where multiple satellites move around each other in the absence of any "master" body.

Other scholars working on organization or governance theory develop ideas on multi-centricity further. Ansell (2000), considering heterarchical governance in Europe, characterizes multi-centricity as not simply the existence of multiple hierarchies or centres, but ability of units lower in those hierarchies (or outside of them) to enter relationships with multiple centres. Others, examining multinational corporations (MNCs), stress the peer-to-peer nature of the heterarchical MNC, where, as the company seeks competitive advantage in

all areas, local subsidiaries take over certain roles from the headquarters and act in conjunction with that head office (and other subsidiaries) (Hedlund, 1986; Gannon et al, 2014; also see Williams and Lee, 2011). Mohan and Parthasarathy (2016), arguing that the Municipal Reforms Programme in India was organized heterarchically, note that agencies of the state took a more collaborative role, acting as facilitators for other organizations positioned as partners rather than subordinates, be they public, private, of from civil society.

The importance of localized or particular specialized knowledge bases is thus highlighted, where each knowledge centre counterbalances the others. Distributing decision-making among the relevant bodies mitigates against information overload or the filtering out of important information by a single centre. Resistance to top-down impositions at the local level is also reduced. So, while negotiation among centres may take more time and still risks conflict, having multiple balanced centres has certain advantages, especially in unpredictable environments (McIntosh, 2005).

2-i-iii – Situational Evaluation, Ranking, and Self-Reference

Carole Crumley's (1995: 3) suggestion that heterarchy is where elements are "unranked or when they possess the potential for being ranked in in a number of different ways" is perhaps the first conception of heterarchy that archaeologists were introduced to (also Crumley, 1979; 1987). Such an understanding combines the two aspects highlighted above, with various individual units or centres being ranked in different ways based upon a multitude of values. Crumley (2001: 24) further develops this position by saying that power (and therefore rank) is linked to values which situationally change (also see Crumley, 1995: 4; 2005: 42-45), with different values come to the fore in different contexts.

As noted above, Hedlund (1993) proposed workers or organizational units in heterarchical

MNCs were ordered with reference to the three particular dimensions. Similarly with Crumley, he stressed that such units may or may not be ordered in the same way across these axes; each unit is evaluated and ranked along each axis. If different dimensions dominate in different contexts then units change in their functional ranking situation-to-situation. Such an organization favours temporary constellations of actors rather than permanent structures, with knowledge of who needs to be contacted or worked with in particular situations being a far more important factor than any vertical scheme of formal control (Hedlund, 1994: 82-84).

Stark (2001; 2009) has perhaps developed this aspect of heterarchy in the most detail. Building upon the work by Hedlund (1986; 1993; 1994), and utilizing Boltanski and Thévenot's (2006) ideas on the evaluation of heterogeneous axes of worth (detail below), he describes a situation where multiple frameworks of valuation are used in parallel (by different members of a group in some situation or by the same individual in different situations). Context-dependent and potentially ever shifting rankings and relative position are the result, with teams and leaders coming together and dissolving as conditions warrant (also see Aime et al, 2014). With all actors being evaluated by all others they are all accountable to each other and each other's value frameworks (Stark, 2009: 19-26), leading to situational, or "natural", leadership (see Angelbeck, 2016; below). Such lateral accountability and lateral authority makes the lives of those operating within a heterarchy potentially far more complex than those living under a system with one paramount axis of rank or value (also noted by Brumfiel, 1995).

Having multiple evaluative frameworks gives a heterarchy the capacity to show 'reflexive cognition' (Stark, 2009: 4-5; also Stark, 2001: 78), i.e. that individuals and groups reflect upon themselves, their relationships, and their goals in terms of those frameworks. Constant need for negotiation and evaluation prompts "re-cogniton" (a new appreciation or thinking

through) of relationships and values (Stark, 2009: 184-87). Jessop (1998: 35-6) also emphasizes reflexive rationality, positioning it as a foundational component of heterarchy; governance becomes negotiated, and thus "dialogic" rather than "monologic".

Stark's (2009: 81-117) account of projects in a technology start-up gives a good example of this contrast. Design and engineering teams work simultaneously, each giving feedback to the other and reconstituting the project/product in the process. A product is thus designed and built at the same time. In a monologic system designs would be simply handed down to engineers complete and ready to be made, design and building are kept as separate processes. Craft projects involving multiple authorship (see DeMarrais, 2013a) would also have to have been dialogic in nature. Ogilvy (2002: 145-8) notes that the system of relations and values making up a heterarchical system can loop around back upon themselves, becoming circular and self-referential, like a Möbius strip. In other words, due to the need for near-constant monitoring and negotiation, values developed within the system constantly act back upon the system to (re)-produce (either maintaining or modifying) its organization.

The importance of context to heterarchical systems is also stressed in the life sciences. Bruni and Giorgi (2015: 487-8) discuss the fact that, in any one context, transcription (and thus gene expression) is often regulated by distinct combinations of molecular elements. Some elements have consistent relationships with each other across contexts, while others will switch partners as situations vary. In a narrower consideration, Fishwick et al (2017) examine the operation of the GATA3 transcription factor, noting that, in different tissues (i.e. contexts) it may act on phenotypic drivers both independently and in combination with other key intermediary molecules. They label this situation as a "heterarchical relationship" (p. 816) between the molecular elements. Finally, Gunji and Kamiura (2004: 75) argue that heterarchy means that the precise subsystem any specific element belongs to cannot be determined with

certainty through time; any action depends on context, and thus which actions belong to which system cannot be firmly determined outside of immediate context.

These discussions highlight the flexibility, dynamism, and complexity inherent to heterarchy. Values, and therefore individual rankings, in any particular dimension are under constant revision, while organization is relative to the agents involved, taking different forms in different situations. Far more variation in organizational forms, relationships among actors, and individual preferences can therefore be expected when compared to an institutionalized hierarchy with more stable aims, roles and values. Coalitions will also be shorter-lived, and thus often harder to identify.

2-i-iv – Decentralization, or Network Horizontality

Discussions of the decentralized (acephalous) or horizontal nature of heterarchies again stress the lack of any paramount unit and the high level of interconnectedness among individual units. This interconnectedness often marks the distinction between discussions stressing decentralized/horizontal systems from those describing a tendency towards multi-centricity. Jessop (1998: 29) captures this feature well by saying "[heterarchy's] forms include self-organizing-interpersonal networks, negotiated inter-organizational co-ordination, and decentered, context-mediated inter-systemic steering". In other words, as noted by McCulloch (1945), relationships are situated on a plane.

S. McIntosh (1999) characterizes much of Sub-Saharan Africa's historical socio-political organization as being heterarchical, and thus showing "horizontal complexity" (see p. 9-14). She emphasizes the region's myriad confederations of horizontal subgroups (lineages, villages, secret societies etc.). R. McIntosh (2000; 2005) concludes that the ancient Middle Niger region was organized in a similar manner, as a lateral network of specialized corporate

groups. Discussions stressing shifting constellations or coalitions of lateral peer-to-peer networks also highlight this theme of horizontality.

Scholars in the life and cognitive sciences have also discussed the network horizontality or acephaly of heterarchy. Wilson and Hölldobler (1988) discuss the ant colony as a heterarchy, whereby there is no chain of command and any member is likely to communicate with any other member (for a similar point, whereby in a web browser's recommended content system any word may hypothetically dynamically become linked to any other, see Rocha, 2001). Coordination is therefore the result of various feedback loops in a network of individuals rather than something organized by one central arbiter. Open plan human settlements would also mean that, theoretically, any resident may easily see and communicate with any other. Such intervisibility and possible free movement situation appears to have been prevalent in Mahan and Baekje (Ch. 4, 5, 7).

Norman et al (2010) make a similar point with regard to the nervous system, where, despite a formally hierarchical structure, there are direct links between the lower and upper levels that bypass the intermediate levels. Lateral links within hierarchical levels are also prevalent. A comparable example relates to the regulation of respiratory dynamics in yeast, where there is no chain of command among the scalar levels (genome, transcriptome, proteome, metabolome) and all levels are in contact with each other constantly, meaning changes in conditions can be communicated throughout all levels very quickly (Murray et al, 2007; also see Sasai and Gunji, 2008). Therefore even within a hierarchy of different scalar levels relations may be functionally horizontal.

The horizontal nature of heterarchical relationships stresses the possibility that any individual may contact or affect any other. Gatekeepers that funnel information from lower hierarchical

levels to upper levels are therefore weaker and less prevalent (also McIntosh, 2005). As in the examples from Africa, any community was able to enter a peer-to-peer relationship with any other without having to consult with some higher authority.

2-i-v – Autonomy

The high level of autonomy that individual actors or organizational units hold within a heterarchical system is emphasized by many writers. Indeed, discussions in the previous two sections imply, require and facilitate autonomy. For example, the situational ranking and evaluation discussed by Hedlund (1993; 1994) or Stark (2009) requires any agent to evaluate others and make their own judgements on how to proceed. Hedlund (1986; 1993; 1994) and Gannon et al (2014) note the autonomous roles that subsidiaries take on within heterarchical MNCs (also see Morgan and Whitley, 2003: 610); while Jessop (1998) also stresses interpersonal or inter-organizational networks as the basis of heterarchy. Such networks thus rest upon the independent decisions and actions of organizational units.

The descriptions of historical Sub-Saharan Africa societies by S. McIntosh (1999) and R. McIntosh (2000, 2005) emphasize the fact that social organization rested upon confederations of corporate groups that were each independent in terms of decision-making (but interdependent regarding subsistence and political economy – see below). As mentioned, R. McIntosh (2005: 137-140, 187-9) proposes that these networks were mediated via the 'reputation' of individuals or groups, again highlighting some extent of autonomous evaluation and decision-making. Along the same theme, Hanson (2009: 194-7) notes that in the historical African state of Buganda chiefs had the right to withdraw support from the king, just as common folk had the right to withdraw support from their chief. How free people were to switch allegiance or withdraw support is questionable considering access to authority

and resources was often semi-hereditary and rooted in kinship (Logan, 2009: 104, 121; Albrecht, 2017; 167-8). Yet despite relationships often being unequal in terms of material and mytho-genealogical resources, authority was rooted in patronage and mutual obligation or dependence rather than despotic power (Pitcher et al, 2009: 146-7).

Similar modes of organization have been discussed regarding historical societies in South East Asia (White, 1995) and the Indian subcontinent (Zagrell, 1995), where autonomous communities and their members had no noticeable restrictions in terms of who they exchanged with or made coalitions with. Angelbeck's (2016) studies of the Coast Salish on the northwestern coast of North America highlight a community heterarchically (or anarchically) organized via a very high value placed on individual autonomy. Households themselves were and are voluntary associations under a household head or 'chief'. Decisions or alliances are agreed in a segmented, consensual fashion from the bottom-up, where chiefs are granted permission to speak for other household members, who are free to leave and join other kin or communities if the chief fails to act appropriately (pp. 55-58) (also see Angelbeck and Grier, 2012). Finally, DeMarrais (2013a) discusses the expectation that crafting activities in a heterarchy are likely to show features such as local autonomy (in terms of scheduling, types of crafts, styles etc.), self-sufficiency, and expediency in production (i.e. using what is to hand at the time of need) (also see Ch. 6).

The high autonomy of organizational units again highlights the relative dynamism of heterarchy. People will be highly mobile, coalitions will be quick to change, and individuals will pursue intense relationships with multiple partners in varied places. Bonds to particular authorities are contingent, with individuals having the autonomy to switch allegiance upon breaches of trust or displays of incompetence. Competition among any leaders with the same knowledge or authority bases may therefore be high, even though high cooperation is

facilitated more broadly.

2-i-vi – Interdependence

Several scholars highlight how, despite individual autonomy, units within a heterarchy are also highly interdependent. Jessop (1998: 29) perhaps characterizes this aspect best, noting actors as "operationally autonomous from one another yet structurally coupled". Individually autonomous units cannot achieve their goals or subsist without their relationships with, and the activities of, others. Stark's (2009) example from the technology start-up discussed above also exemplifies interdependency in that, due to the ever changing landscape of the technology industry, design and engineering groups require feedback from one another to complete their product. Features of a project are thereby developed concurrently rather than a singular design being handed downwards (also see Stark, 2001: 75-9).

R. McIntosh (2005: 101-143) sets out a detailed model of heterarchy that complements the points raised above. Similarly with the dynamic landscape in the technology sector, McIntosh (2005; also 2000) notes that the environment of Middle Niger was (and is) extremely varied and unpredictable. Subsistence generalists would therefore be highly unlikely to be able to sustain the very wide range skills and knowledge necessary to survive. Instead, a network of very specialized communities developed that relied upon each other for goods and information. Communities were interdependent, unable to survive alone despite being autonomous in terms of decision-making. Both White (1995) and Zagrell (1995) see similar patterns in the archaeologies of Southeast Asia and India respectively, where communities tend to each fill local or regional specialized niches, and would thus be mutually dependent on one another.

Different communities are not directed by or acting to the benefit of a central arbiter but are

mutually supporting. Social projects require alliance-making and cooperation, with each group having bargaining power from their specialized knowledge yet simultaneously needing partners to get things done. In some contexts however social units may be generalists, able to provide the majority of their needs themselves. For example, households among the Coast Salish are broadly self-sufficient (Angelbeck and Grier, 2012). Autonomy is therefore very high, and rather than having separate specialized communities each may look broadly similar, yet with a relatively high degree of diversity among them (for this point regarding Mahan see Ch. 4, 7-i).

2-i-vii – System Flexibility/Adaptability

Many of the features discussed above contribute to heterarchies being flexible and adaptable to rapidly changing conditions (see Crumley, 2005: 44-5; McIntosh, 2005; Stark, 2001, 2009; Williams and Lee, 2011). As Crumley (2007: 34) notes, hierarchies tend to be more brittle and rigid, while McIntosh (2005: 18-20) argues that information flow upwards in a hierarchy must flow through 'gatekeepers', which filter out potentially useful information and slow its dissemination (also see Crumley, 2005: 41-44). Such traits make hierarchies prone to collapse. Heterarchies on the other hand, can disseminate information quickly, create flexible coalitions, and include situational reflection on decisions and values leading to the re-ranking of values as conditions shift. A far wider range of possible decisions or states are thus facilitated. In other words, any 'lock in' of a group organization or strategy that is likely to be sub-optimal longer term is mitigated (Stark, 2001:73). Thus, in the past, the average heterarchy may have been more stable and longer lived than the average hierarchy, contrary to many expectations.

2-i-viii – 'Pathologies' and Weakness of Heterarchical Organization

Common weaknesses or trade-offs regarding heterarchical organization have also been highlighted. Bruni and Giorgi (2015: 489) argue that heterarchies are susceptible to double binds, paradoxes, cognitive dissonance, and value anomalies, leading to a potential state of oscillation where no final decision can be made. Crumley (2001, 2005) notes similar issues, that consensus or decision-making will be slow, that constant dialogue is high cost, and that a multitude of voices and positions means decisions may be difficult to finalise. Cumming (2016: 628-9) also highlights that flatter forms of heterarchy lose efficiency (but gain flexibility) due to costs of replication, redundancy, and the need for constant communication (also see Rocha, 2001: 5). He also notes that polycentric governance may be prone to infighting and conflict causing an inability to make decisions, echoing the Bruni and Giorgi (2015). Finally, as noted above, constant communication and tracking of other organizational units makes the lives of individuals within a heterarchy very complex, thus limiting potential group size (also Brumfiel, 1995).

In contrast, Stark (2009) argues for the utility of dissonance. He suggests that friction among individuals or organizational units can be productive, promoting the development of checks and balances to diffuse conflict. Conflict between value frames may also become a resource in unpredictable environments, allowing new combinations, coalitions and solutions (p. 5-6). For Stark (2009) friction causes argument, persuasion and alliance-making, which means no one-system ever 'locks-in' to dominate, leaving alternatives perpetually open for exploration. Crumley (2005: 44-5) also states that conflict may lead to the suspension of old organizational forms but the retention of useful elements in the creation of new solutions and forms.

These aspects of heterarchy, plus its dialogic and interdependent features, mean that even when networks come to an impasse and dissolve, reformulations of values and network structure are highly likely. On the other hand, the consequences of equivalent conflict within a monologic hierarchy may be fatal; an inability to diffuse conflict may turn into active resistance to the centre or the loss of reliable information upon which the centre makes decisions.

2-i-ix – Issues and Archaeological Applications

Heterarchy is clearly a concept with utility across disciplines. Despite this cross-disciplinary use the heterarchy concept is used differently between social sciences-humanities and life or cognitive sciences. In the latter fields heterarchy is described in narrower terms, lacking emphasis on the autonomy of organizational units and a notion of network horizontality that incorporates the necessity of (scalar) hierarchical structure (i.e. the bypassing of hierarchical 'levels'). These issues clearly arise from the fact that the life and cognitive sciences are characterizing fundamentally different types of system. Such systems may be described as 'decomposable' or 'nearly decomposable' (see Simon, 1973; 1981), or scalar hierarchies (Crumley, 1995; 2001); i.e. a collection of interacting subsystems at multiple scales making up a larger system.

On the other hand, the social sciences and humanities deal with agents that set goals, reason, and politick; such communities will have some profoundly different attributes from the ones discussed above. This issue is perhaps highlighted best by the potential never-ending oscillation problem raised by Bruni and Giorgi (2015), and the potential solutions offered by Crumley (2005) and Stark (2009). In a social heterarchy a never-ending loop will not occur, as one unit will either dissolve the partnership prompting a reformulation of the network or

friction diffusing mechanisms will be devised and employed (also see V. Ostrom et al, 1961) (or more serious conflict will ensue). Actors with the ability to reflect and reason may not merely react to external conditions but act on the basis of understandings and processes within the actors themselves. Additionally, because organizational units are autonomous agents, any network may be genuinely horizontal in terms of relationships, something not possible in a scalar system.

Much of the literature focuses on the description of heterarchical systems; however, delineations of *how heterarchy actually works* are few and far between. Current uses of the term heterarchy are primarily abstract descriptions of 'system state' (schematic accounts of units' and/or values' relative positions to each other) rather than the system dynamics (the content and operation of relations between organizational units or values). For example, outlining that there are multiple dimensions and values used to organize the system situationally but without details on what those values may be, what constitutes them, or in which situations each comes to the fore. Thus, in relation to the organization of human social groups, criticisms raised by Saitta and McGuire (1998) and Yoffee (2005), that heterarchy is simply a static abstraction or a way to describe a state of affairs, remain pertinent. Rautman's (1998) call to examine heterarchy through how power relationships are actually constituted appears to have seen little development (also noted by Henry and Barrier, 2016: 91).

More recently, attempts at further development have been made. For example the ecologist Cumming (2016) argues that heterarchy is a combination of network and hierarchical forms of organization, outlining two main axes of variation, individual-network (agents acting alone or having many connections between nodes) and flat-hierarchical (peer-to-peer or asymmetric relations). Unfortunately this scheme again becomes a classificatory exercise, with four 'types' of heterarchy appearing out of the two proposed dimensions. Cumming's (2016)

scheme therefore covers *all* potential forms of organization, making any form "heterarchy". Crumley (2005: 40) also states that, mathematically, heterarchy is the superordinate category.

Such schemes would make the concept relatively impotent, echoing Yoffee's (2005: 179) argument that heterarchy simply provides a 'way to organize our thoughts'. Yet a concept of heterarchy that ends up encompassing pyramidal hierarchies removes an important concept for investigating forms of organization that are not strictly pyramidal-hierarchical. A scheme that places acephalous or multi-centric systems in the same category as pyramidal hierarchies is redundant. Referring back to McCulloch (1945), a heterarchy has no consistent paramount value, thus including pyramidal hierarchy within the concept is inappropriate. I therefore see heterarchy as a distinct mode of organization with the fundamental features set out above.

Certain authors do discuss the deeper processes at work within heterarchy; however detailed expositions of how heterarchy works from the ground-up remain largely absent. For example, Stark (2001; 2009) founds heterarchy in the situational evaluation of peers' performance or knowledge, the capacity of the individual or group for reflexive cognition, and actors that exploit heterogeneous frameworks of value. These are important insights, offering a starting point for developing an account of the operational processes of heterarchy within a social group. However the main thrust of theoretical development is establishing the idea of multiple parallel frames of value and how the tension between these can be productive and adaptive in an ever-shifting environment (e.g. the technology industry). I.e. discussions of how authority or power relations are constituted and what underlies these processes are limited.

Henry and Barrier (2016) apply these ideas to an archaeological issue, arguing that burials of Adena-Hopwell societies in the eastern United States (a society with little-to-no evidence of

strict top-down authority structures) reflect how the deceased person was 'evaluated' by the community. They argue that the burial process was a site for managing 'dissonance' and (re)creating the kinship alliances among participating communities. Unfortunately, Henry and Barrier (2016) do not discuss the issue of multiple evaluative frameworks, what these may have been, how they interacted, nor how the archaeological material may reflect such frameworks; a key dynamic from Stark's (2009) scheme is thus stripped out. While this work is a valuable application of the heterarchy concept to archaeological material, development regarding the dynamics or foundations of heterarchy is lacking. The next part of this chapter will address that issue, and the final section outlines expectations for resulting archaeological patterns. Subsequent chapters then test the archaeological data from Mahan and Baekje against these expectations (specific methods in Ch. 4).

DeMarrais (2013a) sets out a detailed description of expectations for the archaeological evidence regarding crafting activities within a heterarchy. For example that households will be the main loci of production, that crafters will work in various media, that local materials will be used, and that raw materials will be used expediently or 'to-hand'. A long-needed model with which to compare our archaeological data is therefore provided, but the focus is generally only on that one narrow (yet key) field of action. Theoretical expansion of the heterarchy concept is also valuable; DeMarrais (2013a) highlights the key roles of face-to-face contact and social projects for maintaining heterarchical social networks through dependable and predictable interpersonal interaction. However there is little discussion of the processes of wider coalition building or the constitution of authority (for more general discussion see DeMarrais, 2016).

Angelbeck (2016) combines the concept of heterarchy with anarchy theory, stressing the voluntary or horizontal nature of social relations among the Coast Salish of the northwest of

North America, relations that require constant reaffirmation. As noted above, Anglebeck's (2016) discussion highlights the features of autonomy and situational leadership within heterarchy. This work sets a precedent for viewing heterarchy through the lens of anarchy theory (see further below); however the focus is firmly the latter, with the concomitant emphasis on resistance to authority that lies at the core of anarchist theory. Other aspects of heterarchy are therefore not considered, nor is a generalized discussion of archeological expectations offered.

Ultimately the development of the heterarchy concept has been part of a move away from evolutionary and typological models of past societies, although the concept was initially a reaction to central place and gravity models in settlement archaeology (Crumley, 1979; 1987). As set out in Chapter 1, this trend is reflected in the current work, where prevailing evolutionary models in Korean archaeology are being tested through the development of the heterarchy concept. Heterarchy is just one of a suite of efforts to theorize the diverse, context-dependent, processes and relationships past people employed to organize themselves or alternative pathways to power other than traditional chiefdom models (e.g. Blanton et al, 1996; Feinman and Marcus, 1998; Yoffee, 2005; Chapman, 2007; Blanton and Fargher, 2008; 2016; Earle and Spriggs, 2015). These efforts are part of a wider interest, seen since the 1980s and 90s, towards more particularistic and contextual studies rather than in overarching narratives. Heterarchy has also been influenced by network approaches referencing complex systems theories (see Crumley, 2005; 2007), an influence on the present work also (see below).

In order to move away from mere system state description and build upon the developments discussed above, a model of heterarchy built from the ground-up is required. What are the basic organizational principles that underpin, or give rise to, the seven features discussed

previously? Since the concern in this thesis is regarding social systems, I will present an account of 'socio-political heterarchy' in the next section. As noted above, heterarchies of people have fundamentally different features from other living and cognitive systems, and therefore a distinction must be made. The primary concern must be the principles framing or structuring relations between human actors, in particular the constitution of power or authority relationships. Such relations rest upon decision-making processes (for both groups and individuals), a key area in the study of formal organizations (Simon, 1952: 1132) and a core component of the structure of any social group (formal or informal) (see M. G. Smith, 1974: 26-30). The model delineated here will subsequently provide a strong foundation for an outline of expectations regarding the archaeological data, work that has, thus far, been absent or partial.

2-ii - Developing a Model of Socio-Political Heterarchy

A socio-political model of heterarchy must meet both Brumfiel's (1995) challenge to go further than simply being "not hierarchy" and fulfil Rautman's (1998) plea to examine social process and the constitution of power. Such a model must therefore outline the social processes that lead to the more general and abstract features discussed above. Expectations related to patterns of social organization and material culture can then be generated, making the model generally relevant and useful.

As seen below, the works of Stark (2001, 2009) and Angelbeck (2016; also Angelbeck and Grier, 2012) provide good starting points, respectively emphasizing evaluation practices and frames of value, and anarchist conceptions of authority. However both are relatively narrow in scope, and neither fully explore the processes constituting power or authority in their respective case studies. To build such a model (re)consideration of the concepts of power and

authority is required to both highlight base principles (i.e. how power/authority operates in a heterarchy, how decisions are made etc.) and to investigate whether prevailing understandings may have limited general models of social organization and therefore what is deemed possible or plausible.

Many authors generally hold power and authority as separate but linked phenomena, with understandings of these concepts often derived from the definitions of Max Weber (1968, 1978). Here I will summarize prevailing ideas of power, authority, and the relation between them. A fresh understanding of the basic processes through which power comes to be exercised in social settings is presented, one where power may be derived from certain types of authority. This understanding founds my model of socio-political heterarchy; heterarchies forming and being sustained when informal and non-coercive authority is the main organizing principle.

2-ii-i – Conceptions of Power

Following Weber (1968; 1978), many conceptions of power rest upon intent or will, the ability to impose one's will or make others do one's own will (e.g. De Jouvenel, 1962: 96; Emerson, 1962: 32; Smith, 1974: 175; Wrong, 1979: 2-6; Mann, 1986: 4-7; also see Dowding, 1991: 48-9). Others couch their conceptions in terms of abilities to use sanctions to ensure or increase the probability of compliance (see Parsons, 1963: 237-8; Blau, 1967: 116-8; Dornbusch and Scott, 1975: 33). Power thereby becomes 'power over,' that of control, instrumentalism, self-interest (Berger, 2009: 6; also see McGuire and Saitta, 1996), and thus, ultimately, conflict of interests (Lukes, 1974).

Power may thus only be 'seen' *post hoc*. *B* must make some decision before *A* may be labelled as having 'power' over it (or not). Power is latent, relative, and relational; operating

situationally and contextually. Power is thus a property of social relationships rather than a component of any individual (e.g. Dahl, 1957; Easton, 1958; Emerson, 1962; Ogilvy, 1977; Wrong, 1979; Pansardi, 2012).

Despite its latent and situational nature, power remains "a conventionally reified concept" (Collins, 2000: 33), couched as something to be had or possessed (e.g. Morriss, 2002), or as having various 'forms' (e.g. Wrong, 1979). However, while power may be seen as latent within individuals (Dowding, 1991: 4-6; Morriss 2002: 14-25), understanding what powers may be latent in any subject will inevitably include considering their circumstances and social relationships (also see Pansardi, 2012). The exercise of power in social settings will therefore inherently be situational, relative, and relational.

If the exercise of power is rooted in a relational process of decision or choice-making it is fair to posit that there can be various bases or sources of power; ultimate reduction to physical force of credible threat (e.g. Weber 1968: 16-17; Harris, 1957; Arendt, 1961; Smith 1974) is therefore overly reductive. Such bases will be rooted in the material, biological or social resources that grant one actor the ability to exercise power (also see Mann, 1986). Individuals giving 'commands' need not have any means to reward or punish, a range of reasons for action must be expected, and displays via symbols, architecture, wealth etc. may stimulate emotional responses that have no basis in physical force or coercion (DeMarrais, 2005: 76, 81-6; also de Jouvenel, 1958; DeMarrais, 2013b).

In contrast to the above conceptions, which may be labelled 'power over', some scholars highlight 'power to' (Morriss, 2002: 32-4; also McGuire and Saitta, 1996) or 'outcome power' (Dowding, 1991: 4-5, 47-53). Such power is the ability to 'get things done' without intending to change others' behaviour (being 'affective' rather than 'effective' – see Morriss, 2002: 29-

31). However Pansardi (2012) argues that in the almost all cases of interest 'power to' is indistinguishable from 'power over'. Both are collapsible to 'social power,' which is relational; "to ascribe *power to* an individual is to make implicit reference to the social relations in which she finds herself" (p. 81, original emphasis).

To summarize, the exercise of power within a social group is relational, situational and intentional. In social relations exercise of power involves inducing a subject or subjects to make a specific choice, to decide to take the action (or not take an action) that the speaker tells or wishes them to make. Such a situation can only be identified *post hoc*, even though power itself may be seen as latent within a subject. The hypothetical speaker has various ways to influence subjects' decisions towards the desired outcome, for example forceful coercion, persuasion, manipulation, and various modes of authority (see below; also Wrong, 1979; Fairtlough, 2005: 23-4). Thus, the ability to exercise power is *derived* rather than being at the foundation. The resources from which power is derived are therefore central to any consideration of social power; authority (or recognition of it) provides one such foundation.

2-ii-ii –Conceptions of Authority

Authority has often been positioned as a phenomenon linked to but separable from power. A common definition places authority as 'legitimate power' and/or explicit rights to exercise power in certain situations, as a derivative of (ultimately coercive) power, with power having to be 'transformed' (Emerson, 1962; Smith, 1974), 'legitimated' (Blau, 1967: 204), or 'authorized/endorsed' (Dornbusch and Scott 1975: 42). Instead, Arendt (1961) positioned authority as an "augment" from (real or imagined) higher powers outside the political system; separate from power but still related to legitimacy.

The narrow conception of authority as simply 'legitimate power' has arguably restricted what

types of authority are seen as possible; various types of authority have thus commonly been overlooked or underdeveloped. de Jouvenel (1958) reverses the more common position to posit authority as the basis of power, and as being the foundation of group formation (rather than power). de Jouvenel (1958: 161-2) sees the inception of any group as being based on a relationship of 'pure' authority, with the ability to hand out sanctions or rewards coming last, not first (*contra* Blau, 1967). For de Jouvenel (1958) authority creates an 'efficient imperative,' whereby subjects will regularly comply with an order/imperative. If power is the ability to command (de Jouvenel, 1962: 96), and without authority command is not possible, it is therefore authority that derives power.

Compliance may be achieved without recourse to sanction if the command giver is able to 'impress' (1958: 161) subjects in other ways. Such impressions may be made by symbols, signs, or accessories granting 'derived authority,' or simply from certain attributes of the order giver alone (i.e. commands or directions are accepted even in the absence of any symbolism), which is 'pure authority' (p. 161). In the latter case, other than the fact that the individual with authority is *sans accoutrements*, de Jouvenel (1958) does not specify what authority is then based upon; the question is left open-ended, and thus may be compatible with Wrong's (1979) various types of authority.

Wrong's (1979: 35-64) types of authority, ultimately being types of power (see above), offer a framework for examining the factors influencing decision-making and supporting the exercise of power. Wrong (1979) considers any imperative followed without contest or evaluation to be a use of authority (also Ritter, 1978: 131; Lincoln, 1994: 4-6). 'Legitimate authority' is based on a recognized right to command and a duty to obey. In contrast, 'personal authority' lies in a desire to please a certain person due to their personal qualities (there is no need for any belief in the person's magical properties or higher mission). Wrong

(1979) also defines ‘coercive authority’ and ‘inducement authority;’ the former has a subject convinced of an order giver’s ability and willingness to use force (whether that is actually present or not), while the latter derives from the offering or anticipation of economic reward. The final type is ‘competent authority’ based on skill or special knowledge (detail below). Any of these types may be seen as a foundation for de Jouvenel’s (1958) ‘pure authority’ because any of them may operate in the absence of ‘impressive’ material attachments.

When authority is derived from a formal and recognized ‘office’ or position, what Lincoln (1994: 3-4) calls “executive authority” is granted (also see De George, 1978). Peabody (1962: 465-6) labels this a situation of ‘formal authority,’ while 19th century anarchist thinker Mikhail Bakunin (1953: 253-4) calls such fixed positions as ‘imposed’ or ‘official’ authorities, those based on the ‘right’ to obedience. The latter understands such authority as imposed from above, ultimately by force, religion or some version of Hobbes’ (1996 [1651]) Leviathan or Rousseau’s (1971 [1762]) Social Contract (Bakunin, 1950: 33). Such authority is inherent to the formal hierarchy (see Simon, 1981: 196-7; also Peabody, 1962), with its named positions and chains of command in decision-making.

Bakunin (1953) also defines a second type, ‘natural authority’, whereby a subject defers to those with superior knowledge or skill in a particular area of action. Natural authority is argued to be always temporary, legitimate, relative, and freely accepted (also see Angelbeck and Grier, 2012). Such a conception lines up with the ‘epistemic authority’ of De George (1978) and Lincoln (1994), or Wrong’s (1979: 52-60) ‘competent authority’; the person is ‘*an* authority’ rather than them being *in* (executive) authority (Wrong, 1979; also see Simon, 1957: 106). While Bakunin (1953) appears to use the term ‘natural’ moralistically (natural being ‘good’ or ‘legitimate’) its use here is purely in reference to Bakunin’s original formulation.

Natural/epistemic authority is founded upon a recognized asymmetry between parties rather than any personal devotion (see Lincoln, 1994: 4; also Wrong, 1979). In a great many social situations natural/epistemic authority is likely to be at work (also DeGeorge, 1978: 100). Indeed, experimental work demonstrates that subjects' compliance with executive authority is heavily modulated by assessments of the technical competence of the individual in a superior position (see Evan and Zelditch, 1961). Walker (2013) also stresses the importance of voluntary and temporary submission to those with immediately abundant resources or to fathers-in-law among the Urarina in Peru (also see Scott 2009).

While it might be intuitive and perhaps obvious that natural/epistemic authority operates in a great many situations, studies of social power and authority often leave this issue unaddressed. That natural/epistemic authority may provide a fundamental organizing principle is a possibility that has been overlooked; arguably one reason why ideas of social heterarchy remain chronically underdeveloped. In most cases the reference point for many models and studies have been modern institutions and the state, leading to a heavy bias towards identifying and examining formal hierarchies or formal/executive authority within ranked groups (also Gledhill, 2000).

As discussed above, social heterarchies have a 'horizontal' nature and highly autonomous operational units. Yet if the point of reference is restricted to formal/executive authority then heterarchical or non-hierarchical organization may be assumed to lack authority principles. At the very least there is no clear framework for thinking about how such social formations may operate. Without expanding our concepts of authority the development of convincing alternative models of social organization will remain blocked. As argued in detail below, the concept of natural/epistemic authority offers a way to overcome this blockage and develop a model of socio-political heterarchy.

In summary, the ability to exercise power is derived from various social, biological, and/or material resources, which include the ability to coerce and persuade, and the types of authority discussed in this section. When seen from this position, Wrong's (1979) various 'forms' of power (including authority) actually become resources allowing the exercise of power. As Dowding (1991: 18) writes, "*it is the structure of the individual choice situations that does most of the explanatory work*" (original emphasis). Yet consideration of the processes involved in the exercises of power has been overlooked in favour of defining types or modes of power and authority. The following section argues that any exercise of power is, at root, founded in some evaluation and recognition of the right or abilities an individual/social unit has when they attempt to exercise power; this evaluation leads into the decision-making of a subject to comply (or not). My proposal provides a foundation from which a model of heterarchy may be built using the concept of natural/epistemic authority.

2-ii-iii – Recognition and the Process of Exercising Power

Hypothetically, the most basic relation is a dyad, two individuals with no material attachments (Fig. 2-2); such circumstances are the most basic where de Jouvenel's (1958) pure authority may manifest. *A* exercising power over *B* (thus assuming *B*'s compliance) is the result of a process of actions. *A* gives some imperative or states what they wish *B* to do, *B* evaluates *A*, the imperative, and the surrounding circumstances (evaluation being some line of reasoning), and *B* then recognizes a valid (but not necessarily 'legitimate') reason to follow *A*'s imperative, acting accordingly. Power is therefore only exercised if and when *B* decides to comply with *A*'s stated wishes, and then acts accordingly.

Without the evaluation and subsequent recognition of valid reasons for compliance *A* can have no power. Dornbusch and Scott (1975: 358) stated that "evaluation is a fundamental

process in all human interaction." Even though their interest was in authority, my outline of the process for exercising power underlines how evaluation will be a critical feature in *any* power relation (except perhaps in the case of manipulation, although a subject will still be evaluating their situation when making decisions). Furthermore, any conception of authority as untested or unevaluated compliance (e.g. Wrong, 1979) is unsustainable because any individual authority must be constantly evaluated and recognized as such. Any order given which goes beyond the normal bounds of someone's authority is quickly noticed, flagged and/or resisted. Some level of evaluation is thus constantly in operation, even if this process may ultimately be unconscious and only recognized upon such a slippage. The question then becomes, what prompts favourable evaluation and recognition in any community or institution?

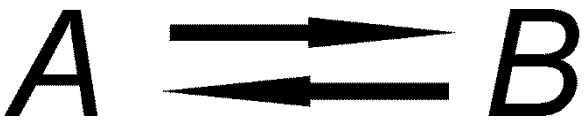

Figure 2-2: A basic dyad where both parties regard or evaluate each other (arrows).

The principles used to evaluate anyone giving a command will vary dramatically among contexts and the resources mobilized. For example, in terms of outright coercion or physical threat, a fundamental consideration may be the likelihood of physical damage. The recognition of a high probability of violence gives a 'valid' reason for compliance. On the other hand, an individual with formal/executive authority may have their imperatives judged as invalid (and thus ignored) in certain contexts if their technical skills are not recognized (see Evan and Zelditch, 1961).

My proposal resembles that of Blanton and Fargher (2008: 15-20), who discuss issues of cooperation and compliance in state societies, arguing that the goal of studies examining collective action should be to identify the social and cultural factors impinging on each person's decision to cooperate or act (also see Fargher and Blanton, 2007). Yet their model is very much focused on the payment of taxes to some formal authority in exchange for various public goods. The "rational social actors" Blanton and Fargher (2008: 15-17) discuss explicitly do not rely on social norms in their calculations and evaluations (also Blanton and Fargher, 2016: 32-4), even though there is ample empirical and experimental evidence that actors do commonly learn and use norms in collective action situations (see E. Ostrom, 1990, 1998, 2000, 2003; E. Ostrom et al, 1999; Cook and Cooper, 2003). In addition, public goods need not be managed by some central authority; indirect reciprocity mediated by reputation scoring promotes cooperation in experimental public goods games (Milinski et al, 2001; 2002).

In the model presented here then, evaluation will inherently be modulated through 'functions' such as social norms, personal goals, the likelihood of a person having the ability to carry out any threat or sanction, competence, etc. Such factors lead to compliance because they cause a subject to recognize, or act as if they recognize, that another person has right to order, that the order itself is right or appropriate, that the order somehow benefits the subject, or that the other has the will and ability to sanction.

Evaluation and subsequent recognition are the fundamental components of a power relation. As discussed, there are a multitude of possible resources that a potential order-giver may mobilize, appeal to, or assume, and also highly varied conditions forming and framing the criteria used to evaluate and recognize the 'validity' of an imperative. On a wider scale this myriad of factors combines to create different networks and patterns of social organization.

The principles and resources mobilized in within hierarchies and heterarchies can be expected to be very different. Such distinct forms of social organization will manifest differently through a group's material culture, allowing models of expectations for the archaeological material to be built. Although expectations could be set out for many different sources of recognition and power, this work's focus is heterarchy. I will ground socio-political heterarchy on natural/epistemic authority; the following section will further develop this proposal through the ideas of evaluation and recognition discussed thus far.

2-ii-iv – From Natural/Epistemic Authority to Heterarchy

To have natural/epistemic authority means gaining recognition that one has superior knowledge or skill, thereby giving a 'valid' reason to comply with imperatives and requests. A subject's (or multiple subjects') decision thereby results in an act of 'granting' (person-to-person), 'allocation' (group-to individual), or 'delegation' (individual-to-multiple others) (see Adams, 1977: 388-9). These actions qualify an individual with authority to direct others' actions and act in certain ways. A critical aspect of such a relation is that the recognized right to make decisions may be freely withdrawn (necessarily) should the authority give commands, make decisions, or take actions that subjects do not recognize as valid. A lack of this ability to withdraw means that the relation was either not based on natural/epistemic authority in the first place, or the resource underlying the exercise of power has shifted to another type or base.

The recognition of an individual's natural/epistemic authority is borne out of an evaluation, specifically an evaluation or judgement regarding the individual's relative skill or knowledge. An evaluation necessarily needs an evaluative framework, the criteria and values through which recognition authority is reasoned out and justified. This is not to argue that individuals

will be holding strict and exact accounts or cost-benefit calculations, humans tend to use broader heuristics to reduce the complexity of their world and environment (see Simon, 1952, 1956, 1981; Gigerenzer, 2008). The proposed evaluative frameworks are made up of broad rules that may not remain entirely consistent through time.

Attributes commonly valued or emphasized in evaluation are therefore highly informative when attempting to infer broadly held criteria in a wider group (see Boltanski and Thévenot, 2006; Stark, 2009). Commonly held evaluative frameworks are likely to coalesce because members of a group will negotiate and recognize issues such as what constitutes an end goal, the successful (or failed) completion of a task, or the attributes one needs to be able to complete some task. More generally than the level of the singular type of task, both Holland et al (1998) and Boltanski and Thévenot (2006) respectively discuss 'figured worlds' or simply 'worlds,' simplified worlds where actors either engage in a limited range of meaningful activities or particular characteristics are valued the most highly. For example, a world of the craftsperson may emphasize not only the ability to regularly make goods of a good quality, but also knowledge of necessary ritual, or even attributes such as being even-tempered or efficient. Clearly there may be variation and disagreement among individual members, yet core values that repeatedly influence decision-making over time will be discernable.

In the case of natural/epistemic authority the issue then becomes how competence or skill is assessed in the relevant arenas of action. Any individual exercising power must, actively or passively, continually demonstrate their competence with reference to the prevailing evaluative framework. Every action may therefore be seen as a test, although not by design (Boltanski and Thévenot, 2006: 137-8). These 'tests' provide feedback into future evaluations, transforming the status of both the evaluated and the evaluator (Hutter and Stark, 2015: 2-3).

Mistakes or deficiencies result in a loss of worth, prompting ‘controversy’ (internal to a subject or among a wider group) and the need to re-evaluate (Boltanski and Thévenot, 2006: 134-5).

Active information exchange between members of a network will therefore be important, informing instances of evaluation and reducing the stress of having to continually monitor the situation. Yet, due to the necessary continual monitoring (and information exchange), any relation, or network of relations, organized via natural/epistemic authority will require a relatively high amount of energy, and will thus also make the lives of those within such a network complex. Such complexity is certainly likely to limit group sizes (also see DeMarrais and Earle, 2017: 195). Furthermore, the fact that networks based on natural/epistemic authority necessarily become more complex as their scale increases means that reliance on heuristics and figured worlds is also likely to become further pronounced.

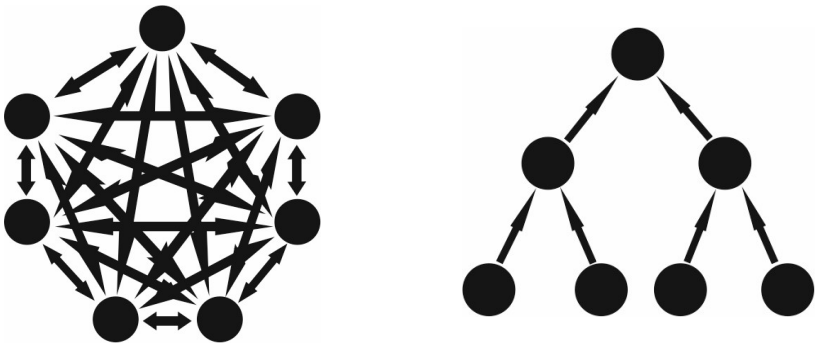

Figure 2-3: (i) possible flows of evaluation and authority recognition in a social group organized via natural/epistemic authority (left); (ii) possible flows of evaluation and authority recognition in a social group organized via formal/executive authority (right).

Principles of monitoring, evaluation, and free association (or authority recognition) mean that,

potentially, authority recognition may flow in any direction or occur (in either direction) between any pair of actors (see Fig. 2-3i). In any situation groups negotiate and self-organize under those evaluated as most competent (see below); natural/epistemic authority does therefore lead to hierarchy, but such hierarchies remain temporary and unfixed, changing as conditions shift. In contrast, in a group organized by formal/executive authority, recognition is channeled and restricted, flowing only one way, upwards, from the lower levels towards the apex (see Fig. 2-3ii). In the latter case, as with the ideal schemes from celestial/ecclesiastical (see Hedlund, 1993; Stark, 2009: 27) or *ex astra* (out of the stars) (see McIntosh, 2005: 18-9) hierarchies, general interaction and monitoring is restricted to the levels immediately above and below one's own. In a heterarchy then, differences in rank will be graded and cycle through time (multiple authorities may co-exist), whereas in a hierarchy distinct levels and narrower roles will be identifiable.

Up to this point only single abstract situations or single 'worlds' have been considered, however multiple 'worlds' will coexist in any society each with their own evaluative frameworks and emphases (see Boltanski and Thévenot, 2006; Stark, 2009). As seen in Figure 2-4, different situations will lead to different patterns of authority recognition group organization as individuals refer to distinct evaluative frameworks. Group organization and the people 'in charge' are therefore broadly context dependent, with no one dominant overarching framework. As Stark (2009: 6, 17-19) notes, actors will know and understand the general traits valued in the various 'worlds' relevant to them, being able to shift emphases as situations develop and change. Individuals may thus potentially build generally recognized competence or authority in a numerous areas of action (while others may stick to a narrower range, or lack the competence to extend into multiple fields).

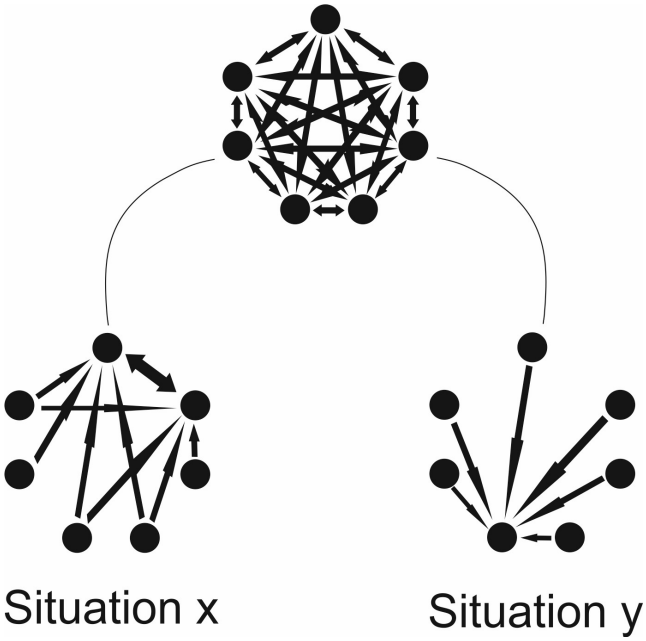

Figure 2-4: Flows of authority recognition change depending on the situation (i.e. the evaluative framework employed to judge competence).

The 'worlds' or evaluative frameworks discussed thus far are manifested and maintained through people's activities and practices, integrated and mediated through artefacts that afford certain ways of understanding and doing (Holland et al, 1998: 60-2). Reference to these frameworks is active, thus includes a necessary component of energetic and material investment (also see DeMarrais, 2013b). Social effort is therefore channeled into displaying competence through material culture, which could also be seen through a lens of costly signaling (see Wiessner, 2002; Conolly, 2017). Being able to create or having access to certain types of object would signify competence in some field of action, with particular material culture acting as "reputational symbols" (T. Ahn et al, 2004: 126) (see Ch. 7 for further discussion). Such investment might be to arrange space in such a way that facilities certain interactions, evaluations or monitoring (see Stark, 2009; Hutter and Stark, 2015: 3-4), or may include artefacts that make certain identities and evaluations possible (see Gell, 1998: 20-3), supporting claims to natural/epistemic authority. Particular 'sets' of objects may be bound together in relation to an evaluative framework (also see Gell, 1998), providing a

reference or shorthand for the process of evaluation and recognition. All of these processes afford certain archaeological expectations, which are detailed in the following section.

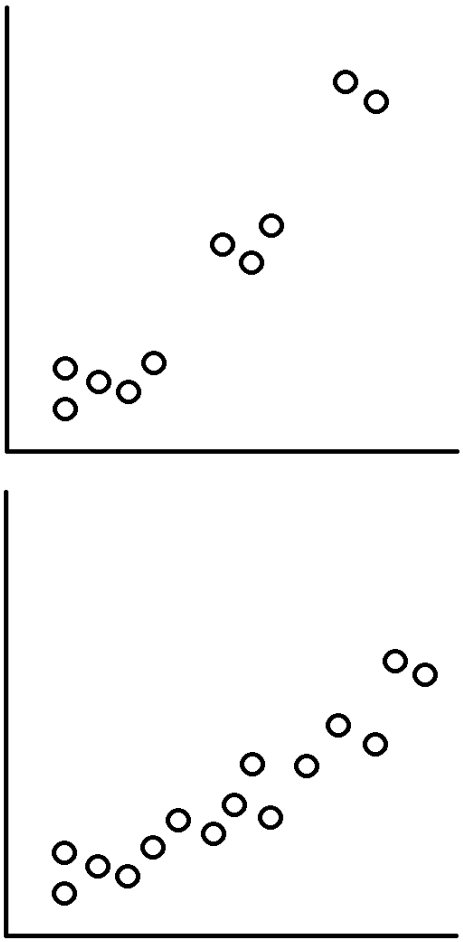

Figure 2-5: Hypothetical distributions of wealth and/or authority symbols in a ranked or hierarchical society (top) and a heterarchical society (bottom).

Access to elements of these material sets signifies some aspect of attachment, competence, or knowledge in the relevant type of activity. Even where there may be some overlap, different frameworks can be expected to have distinct 'sets' or assemblages of artefacts associated with them. In an open system grounded on natural/epistemic authority individuals are likely to have relatively open access to material signifiers various 'worlds' because the only barriers come via the wider group's recognition (or denial of such) and the individual's actual competences. To reiterate Stark (2009), individuals therefore may 'belong' to several worlds,

utilizing different resources when the situation calls. On the other hand, there will be individuals who are likely to have minimal access to any such materials, or specialize in one area. A gradient of access should then be expected, rather than some stepwise pattern indicating different levels of access or formal ranks (Fig. 2-5). For example, in the community studied by DeMarrias (2013a) all households had broadly similar material culture and, despite high variation in the practical uses of those artefacts, no household was accumulating items at a noticeably higher intensity.

There are likely to be exceptions however. In certain cases of high community specialization, like those discussed by R. McIntosh (2005 – see above), such 'sets' may be effectively exclusive to certain sub-populations. In the decentralized city studied by R. McIntosh (2005) each cluster was highly specialized towards particular activities (e.g. metalworking, potting, fishing – see also White, 1995; Zagrell, 1995). Yet, from the perspective of heterarchy presented here, a gradient would still be expected *within* each community.

A group organized by natural/epistemic authority would therefore carry the main features of heterarchy outlined above. As with Ogilvy's (1977) emphasis on a plurality of core values, the existence of several frameworks of evaluation provides multidimensionality. Having multiple such 'worlds' facilitates situational evaluation and ranking, with different contexts requiring reference to different evaluative frameworks. Where no one 'world' dominates multi-centricity results, with multiple 'nodes' of authority emerging and no one being able to control the others (at least at all times). The fact that members of a group may and are, ideally, monitoring all others highlights a basic horizontality; although some form of sequential hierarchy (G. Johnson, 1982) may be necessary, with sub-groups being represented by a spokesperson/head (e.g. Angelbeck and Grier, 2012). Although hierarchies form situationally, and there will be some temporary hierarchy present at any time, hypothetically any

combination of relations is possible. There is thus the inherent freedom or autonomy in terms of authority recognition, yet also simultaneously an interdependency because single frameworks cannot cope with all likely situations. Group organization thus changes as situations change, emphasizing the aspects of flexibility and adaptiveness often linked with heterarchy.

Although much of the above description talks of groups or 'individuals,' there is no need to restrict this socio-political model of heterarchy to every individual human actor. As hinted at by Yoffee (2005: 179), heterarchical organization may develop among corporate groups or formal hierarchies. The model presented may thus be seen as a 'network' view, where each actor or node may either be an individual human agents or some broader organizational social unit. This understanding of heterarchy is therefore applicable to various scales, from an intra-community heterarchy to a regional heterarchy of hierarchies; the key element is the nature of relations among the various nodes.

Despite the emphasis on authority, this thesis may be seen as continuing a more recent archaeological interest in what may be called 'bottom-up' processes of social organization. Here then, organization emerges from interactions among the general population rather than being imposed from above (also see DeMarrais and Earle, 2017). The focus on authority relations does appear somewhat anachronistic with related work emphasizing cooperation and consensus (e.g. DeMarrais, 2016; Ikehara, 2016), cooperation through calculative collective action (e.g. Fargher and Blanton, 2007; Blanton and Fargher 2008; 2016), or the interactions between multiple sub-populations within a single polity or urban area (e.g. McIntosh, 2005; Yoffee, 2005, 2016; Green, 2018; also Brumfiel, 1992); however in many cases organization based on natural/epistemic authority would be labelled as cooperation. Relations in a heterarchy will be (ideally) freely entered into, and accomplishing tasks requires negotiation

and a granting or delegation of authority. 'Order' thus comes via free association and thus looks very much like cooperation.

The model of heterarchy presented here is not only applicable to varied contexts but also, given the incorporation of and reference to material elements, allows a set of expectations for patterns in the material culture of heterarchical social structures to be delineated. The following section sets out and justifies expectations for patterns within the archaeological material, thus providing a model relevant to a wide range of archaeological contexts. This model is underpinned by my account of socio-political heterarchy, itself grounded in an outline of how authority relations are constituted (i.e. social relations). We therefore now have reasons *why* the features of heterarchy described by other authors are actually features of heterarchy; furthermore we have a tool to move away from 'system state' descriptions and towards thinking about the processes of social organization and the processes through which that organization may change.

2-iii - Archaeological expectations for heterarchical social formations

The socio-political model of heterarchy outlined above allows concrete expectations for patterns within the archaeological material to be built. Data can thus be 'tested' against a reasoned and explicit model. Similarly with DeMarrais' (2013a) work on crafting, this approach is founded in a comprehensive consideration of how heterarchy may be manifest through material culture, going beyond the general descriptive criteria reviewed above. Similar expectations can be set out for textual accounts, which will be discussed next (Ch. 3).

As discussed above, heterarchies may be formed at various scales, so any expectations for the archaeological material must also refer to multiple scales. Here I will focus on the individual site/settlement and regional scales, starting with the former and moving upwards (although

some expectations necessarily mirror one another). Features expected at each scale are described and the reasons for those expectations are delineated. Some of these features may appear contradictory, but the fluidity and multiple potential forms a heterarchy may take makes this unavoidable. That different ends may result from similar initial conditions and processes is a feature of complex and dynamic social systems (Allen, 1997; Gerding and Ingemark, 1997; Bertuglia and Vaio, 2005: 248-51, 279-81), and does not negate the underlying reasoning; such features remain distinctive to heterarchy.

2-iii-i – Single-Site Scale (see Table 2-1 for summary)

With authority being more fluid, based upon competence and always contingent on the recognition of others, a multi-centric or cycling pattern of apparently powerful or influential social units (household or funerary clusters) must be expected (Fig. 2-6). Either multiple social units on the same site will have been able to attract and mobilize followers, or this ability waxed and waned over time as mistakes cause the loss of recognition or competent individuals die/leave. This pattern will be compounded because various 'worlds' operating concurrently, promoting multiple 'centres' with different competences (more below). The population associated with any one site will therefore be relatively variable through time, as people moved towards a nexus of authority and then away again. In contrast, hierarchical organization would lead to a single identifiable paramount at any one time, indicated by features such as distinct demarcated compounds and/or monopolies over imported or authority signifying material culture (Wright, 1984; Earle, 1987; 1991; Blanton et al, 1996). Still, a succession of short lived hierarchies may lead to high population dynamism.

The presence of either multiple prominent social units or a cycling of influence through time means that it is extremely unlikely that any one social unit could have gained a longer-term

monopoly over production activities and food storage. Again, the existence of multiple frames of evaluation works against attempts by any social unit to gain authority in all areas. Evidence for crafting activities may therefore cluster into areas associated with distinct activities. Alternatively, groups each had favoured types of craftwork yet also autonomously engaged in other types of crafting, working expediently as and when needed. High heterogeneity in craft goods' styles, methods, and locations of manufacture would therefore be expected (also see DeMarrias 2013a).

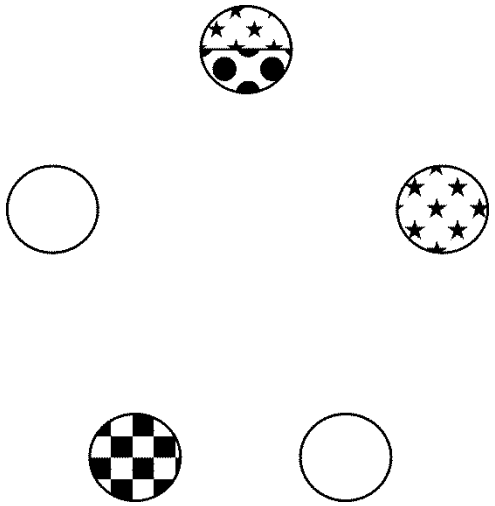

Figure 2-6: Schematic view of a multi-centric site, where each circle represents a cluster of associated features; patterns (dots, squares, stars) represent the presence of authority signifiers from different 'worlds' of evaluation.

While heterogeneity in styles or production procedures is not incompatible with social hierarchy, evidence for the high standardization of goods and/or the attachment of crafting to elite compounds would indicate some form of hierarchical control over production. Centralized control over production has been linked with high standardization (Earle, 1991; Costin, 1991; Costin and Hagstrom, 1995), and stricter standardization would indicate a paramount aesthetic value. Attached specialists living in the proximity of compounds with other signifiers of distinct authority also indicate some form of hierarchical control over

aspects of production (Costin, 1991; 2007), although crafting may also have been carried out by elites themselves (Inomata 2001).

A high level of autonomy for social units is likely to lead to storage monopolies being resisted, whereas top-down authorities are likely to monopolize storage within their own compounds (Earle, 1987, 1991; Blanton et al, 1996; Earle and Spriggs, 2015). Storage features will thus either be communal and public (perhaps 'managed' by a competent party) or sequestered into households. In the latter case, certain influential units are likely to have had access to more resources than others, but a gradient of difference is expected rather than clear class/rank distinctions. Production and storage activities are therefore expected to be relatively evenly distributed across any site, or instead cluster around particular social units if such activities were managed by certain individuals.

Graded differences among social units means that a lack of evidence for social units with explicit and long-term vertical 'ranks' or 'classes' can also be expected, whereas social rank signified by a suite of material signifiers would be visible in a hierarchy (Fig. 2-5). Similarly with the discussion on crafting and storage, access to signifiers of authority from any specific 'world' would also be relatively unrestricted and difficult to monopolize. Variations in competence between generations, inability to be competent (or be seen as competent) in all relevant areas, or resistance to monopolies or overreach of authority would have blocked longer-term monopolization of authority. Differences among social units in terms of access to 'wealth' or symbols of authority are therefore also expected to be on a gradient; although, as above, a multi-centric pattern may appear when different units emphasized different 'worlds' of authority.

At both settlement and funerary sites the overall picture will maintain a graded pattern, with

graves and tombs likely to be highly individuated and relatively high variation among households or house clusters. This scheme does not preclude grand or exceptional funerary monuments however (see McIntosh, 1999; Henry and Barrier, 2016), exceptional individuals or social groups are to be expected to have arisen at various times. However, a series of associated 'exceptional' tombs would indicate some concentration of authority into a particular social unit, thus suggesting a group organization other than heterarchy.

A lack of clearly identifiable ranks or classes means that a qualitatively distinct 'elite' will be hard to identify in a heterarchical social formation. This expectation applies not only to any social unit's access to particular resources or reputational symbols but also regarding architectural and spatial features. Unlike in a hierarchy, demarcated 'elite' compounds removed or hidden from the general population are highly unlikely to appear in a heterarchy. Additionally, distinct and elaborate domestic architecture that was significantly different from common forms is not expected (although elaborate public architecture is not precluded – see below). The lack of significant group or class demarcation may well extend to an absence of clear partitions among individual household clusters, which would have facilitated mutual monitoring and communication. This pattern may derive from resistance to or the loss of social authority for those who tried to monopolize or sequester/hide resources, or as an intentional strategy that enabled some sort of communication. Either way, intervisibility will have been high.

If individual households or social units were effectively autonomous it is also predicted that units would not have been officially or routinely restricted in terms of their access to goods and symbols, or their production activities. Where hierarchical social ranks exist, access to particular goods or symbols will be restricted for the majority, either through active suppression via sumptuary rules or the simple inability to procure such items (lack of wealth,

inability to make relevant social relationships). Variation in the intensity and identity of units' exchange partnerships is therefore expected in a heterarchy. Perhaps the most obvious way to assess this issue is gauging how varied any links with external sites and actors were among the social units/households on any one site. Data demonstrating high heterogeneity in the external links of the households or clusters making up a site would be evidence that contemporaneous social units were free to forge and maintain their own relations with other actors, or that external relations were highly fluid through time (see Fig. 2-7). Some level of autonomy may thus be inferred, as individuals were free to make and manage their own relations.

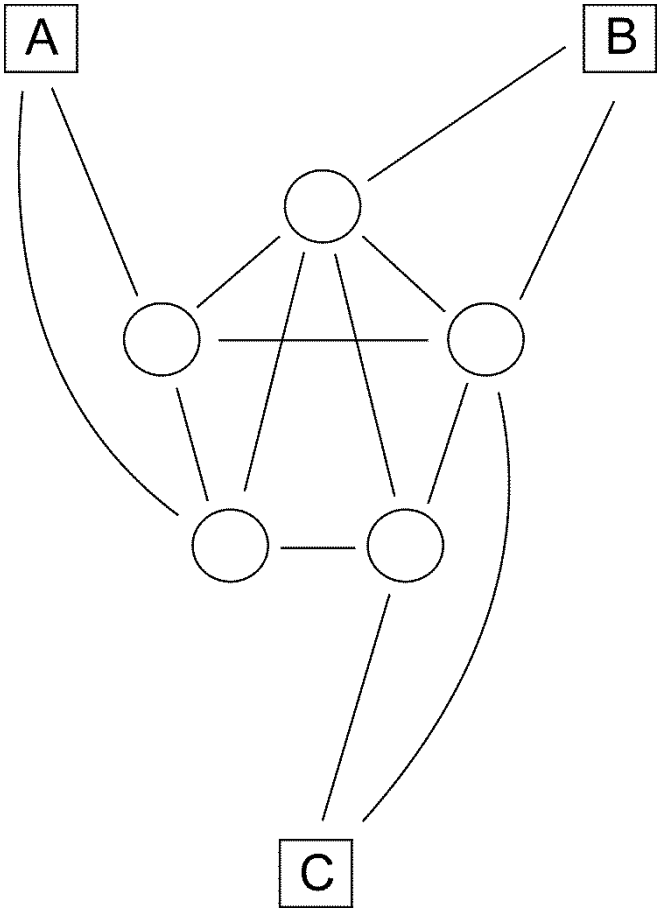

Figure 2-7: Schematic view of a site with a heterogeneity of connections with external sites or actors (A, B, C) rooted in the autonomy of organizational social units; where connections indicate the presence of related material forms.

The need to demonstrate, display, and mutually monitor competences encourages the existence of (central) places or spaces where individuals could have come together face-to-face. Frequent communication or face-to-face meetings are demonstrated to heighten rates of cooperation and reciprocity (see Cook and Cooper, 2003; E. Ostrom, 2009: 190-91; 2010: 654-56), and will provide conditions conducive to evaluating another actor's intent and competence. As Stark (2009: 91-97) notes, spatial layouts facilitating direct contact between actors allows for evaluations, recognitions, and free-flowing recombinations to be made. Hierarchies are also likely to have such public spaces, but emphasis will have been on performances by or the generosity of rulers or elite patrons rather than facilitating wider communication (Renfrew 1974; Blanton et al, 1996; Inomata, 2006).

Activities carried out in such spaces may vary, for example exchange, feasting, or ritual; but some space bounding and facilitating these activities is likely in a heterarchy. Such spaces may also have been associated with particular 'worlds' or frames of value, thus expanding the number of meeting places in evidence. That said, if social units were very strongly autonomous or sites very small in scale such meetings or feasting may instead have taken place within individual households or household clusters. Such a situation would be characterized by a *lack* of open meeting spaces, with material culture relating to feasting, authority, and ritual clustering within domestic compounds.

Feasting evidence is potentially a highly visible indicator of social organization, and has seen much ethnographic, theoretical, and methodological development over the past 25 years (e.g. Hayden, 1996, 2001, 2014; Dietler and Hayden, 2001; Jones, 2007). Feasts in heterarchies are likely to have had distinct features, particularly in contrast to feasts in hierarchies. Communal feasts will primarily be oriented towards making and maintaining relationships among relatively autonomous actors, with social distinctions downplayed. Alliance-making

feasts, work feasts, or self/clan empowerment feasts would fit such a pattern (Dietler, 2001: 76-82; Hayden, 2001: 55-58), as would those held to facilitate material exchange. Material symbols of status are likely to have been displayed at such events, but such symbols will signal competence in some world of authority rather than reinforcing class/group distinction. Widely visible ritual or other display is also expected, potentially competitive, as hosts and/or participants demonstrate their skills or knowledge. What has been termed "diacritical" or "tribute" feasting is not likely to be associated with a heterarchy; larger scales of activity, ostentation, exotic foods and serving vessels, and the redistribution of material wealth highlight the generosity of the host(s) and reproduce social distinctions (Hayden, 1996, 2001, 2014; Dietler, 2001), features of more hierarchical organization.

The various 'worlds' of authority each likely carried their own distinct sets of signifiers of competence and authority. Elements of such sets will therefore be reflected in the archaeological material from both settlement and funerary contexts. Certain artefact types will be found in regular association and in contexts related to specific activities (e.g. some type of craftwork, martial activity, feasting paraphernalia). Signifiers or sets of signifiers are likely to have required relatively high levels of investment to manufacture or obtain, being positioned for display. Such display items may have been worn on the body, used in public interactions, used during feasting or communal activities, or placed in visible positions during funerary rituals. Symbols of authority will obviously also be prevalent (or even more prominent) in a hierarchically organized group, yet they will be less heterogeneous, more bounded in terms of access or location, and more stable through time as a paramount axis of authority evaluation is locked in.

What is or is not a likely signifier of authority must therefore be inferred through context, and unfortunately archaeologists are very likely to miss or have no access to various material

aspects of the various ‘worlds’ of any social group (also see McIntosh, 2005: 144-51). Identifying possible material ‘sets’ will thus need reference to wider social contexts rather than being conclusive on any single site (see more below). Despite this issue, heterogeneity in material styles and any potential authority symbols associated with each household or grave cluster (or individual household or grave) would be expected on the site level. Still, some cases will be relatively clear cut, with particular signifiers strongly associated with particular contexts or areas, which themselves may be associated with evidence of specific types of activity.

Finally, a heterarchical social organization is predicted to have a weak (or absent) hereditary transfer of authority and wealth owing to individuals having to demonstrate their competence rather than competence being assumed or derived from lineage as it would be for more classical chiefdom societies (Earle, 1991). This situation may manifest archaeologically via high variability in the ‘wealth’ of domestic and burial clusters, or a lack of clustering at all, with houses or graves placed individually. Clearly however there may be some hereditary passing of competence and/or wealth due to improved opportunities to observe and learn skills from competent family members (also Roscoe, 2000: 87). Additionally, a ‘benefit of the doubt’ may be initially given to those associated with a particular authority, giving them a leg-up that could facilitate some level of heredity in authority. Even so, any failure or lack of competence would then limit recognition as an authority, and introduce significantly higher variability than that expected for a society with hereditary class or rank. Household or grave clusters that show a more stable access to wealth or social position over the longer term may be indicative of such processes; however distinctions with other clusters would still be graded rather than a class apart.

Table 2-1: Archaeological patterns expected for heterarchies on the single-site scale.

- **A multicentric or cycling pattern of apparently powerful/influential households or housing clusters**
    - No apparent monopoly of any one household or cluster over production and storage (could be 'balanced' pattern or have high household/social unit autonomy)
    - Site population and residence will be fluid through time as people move towards a nexus of authority and then away again
- **Lack of evidence for explicit and long-term vertical 'rank' or 'class'; households not restricted in access to goods or production (i.e. high household autonomy)**
    - Differences between households in terms of 'wealth'/symbols of authority are on a gradient rather than having clearly demarcated 'ranks'
    - Households/household clusters will show variation in terms of external links (through varied types of goods and styles)
    - Lack of clear partitions between houses or housing clusters; no demarcated (perimeter walls, architectural styles etc) and qualitatively distinct 'elite' compounds
    - Individualization of tombs; with the richness of tombs on a gradient, with no distinct 'ranks' (although rare elaborate tombs may also occur)
- **Presence of central places/spaces to meet and feast/perform ritual**
    - Presence of multiple and accessible meeting or gathering areas; alternatively meeting and/or feasting could take place within individual households
- **Multiple and distinct symbols (or 'sets' of symbols) of authority**
    - Varied material culture styles and symbols of authority found within domestic contexts
    - Heterogeneity is to be expected in terms of any potential symbols of authority found tombs
    - Hereditary transfer of power/authority or 'wealth' is weak or absent (may therefore see a lack of family clusters in terms of burials, or a pattern of high variety in terms of grave 'richness' in a cluster)

Table 2-2: Archaeological patterns expected for heterarchies on the regional scale.

- **A multicentric or cycling pattern of central or larger settlements (or any settlements acting as loci of authority)**
    - *Or*, a multitude of smaller, non-centered, scattered settlements (may be specialized or self-sufficient but not clearly 'rankable', differences on a gradient rather than demarcated levels)
    - Sites/areas will be self-sufficient, able to independently produce or procure the material items needed to sustain their life and life-ways (i.e. no apparent social barriers to obtaining material goods)
    - Over time, high fluidity in population movement between sites/areas as loci of authority shift or relationships break-down
- **Variation in symbols of authority (should any exist), with expression of particular lines of authority represented by particular material culture**
    - Settlement size will not necessarily correlate with the presence of symbols of authority or 'wealth'
- **Widespread presence of places to meet and publically feast/perform 'ritual' (alternatively there may be various specialized sites dedicated to these meetings)**
    - Any seemingly centralized meeting spaces will be qualitatively similar in scale and/or focus on specific lines of authority
    - May be meeting within households; expect feasting evidence and authority symbols to be focused within such contexts
- **Locally focused production, potentially with high variability in styles (i.e. low standardization)**
    - A pattern of balanced production specialization, whereby certain sites monopolize the production of particular type of good and interacting with other specialized sites without apparent interjection of a centralized authority
    - Individual sites will have will have different emphases on which other sites/regions they are dealing with (i.e. no central administration or interjection of bureaucracy); these ties will change rapidly through time

2-iii-ii – Regional Scale (see Table 2-2 for summary)

Heterarchy on a wider spatial scale may take a number of different forms, from a multitude of autonomous smaller settlements or settlement groups up to a horizontal network of hierarchical social groups. Despite this potential variability, any heterarchically interacting social units (whatever the internal organization) are expected to have been effectively self-sufficient, able to independently produce or procure the material items needed to sustain their life and life-ways. In other words, no social barriers to obtaining material goods will be apparent (e.g. no sumptuary laws, limits associated with strict social rank etc.). This scheme potentially conflicts with that of R. McIntosh (2005), whose model of heterarchy rests upon the interdependence of narrowly specialized groups (backed up by social norms such as mythic rights of the first groups to have settled any area) rather than in socio-political authority relations. Each group is therefore explicitly not self-sufficient. Despite this issue, in R. McIntosh's (2005) example each corporate group remains operationally autonomous, horizontally evaluating and negotiating with other corporate groups. Groups independently produced and procured the material resources they need; foregoing certain resources or switching allegiance would therefore always be an option (pp. 141-3).

High local autonomy and generalized self-sufficiency means that heterarchy will be associated with locally focused production systems and high variability in styles (i.e. low standardization). Two broad patterns are possible. First, each site was genuinely self-sustaining in terms of production activities, whereby local materials will predominate and manufactured items will show a high degree of idiosyncrasy from site to site (even within clear region-wide styles). Alternatively, there will be a pattern of relatively balanced specialization, where certain sites specialized in certain crafts and managed exchanges with other sites without the interjection of any central authority. In this latter case individual sites

will have clear preferences or emphases in terms of which other sites or regions they exchange with. Such ties will also potentially change relatively rapidly through time. Of course, the overall picture is likely to be a mix of these situations, with some goods locally crafted by self-sufficient groups, and other goods more specialized to certain sites or social groups.

Various features expected on the single site scale are mirrored when viewing the regional level. For example, a multi-centric or cycling pattern of central settlements (or any places acting as loci of authority) is to be expected, as recognition of specific authorities ebbed and flowed over time. Alternatively, each 'centre' may be associated with particular specialized communities, each in a relation of interdependence with the others. This latter situation will perhaps be easier to detect via archaeological data. However, as noted by Chirikure et al (2018: 47-50), if centres of authority rotated or cycled through time a balanced pattern is probable, with a series of sites that have similar scales and traits. One consequence of such a pattern is that any centre of authority at any one time may not be the largest or most elaborate site (also see Chirikure et al, 2018: 48). Scale or elaboration alone therefore cannot be used to infer authority or rank. Differences among sites, or at least among identifiable centres of authority, are also expected to be on a gradient, with no one paramount. Finally, with bases of authority being in flux, high dynamism in terms of population movement will be a feature of any sites in a heterarchy.

Constellations of smaller, non-centered and scattered settlements that are not clearly 'rankable' in terms of activities, central spaces, or symbols of authority/'wealth' are an alternative possibility. Such settlements may be specialized or generalist, and varied in size, but key expectations similar with the situation outlined above remain. Differences will lie on a gradient, with a relatively wide variability in terms of material culture and partners for

interaction. The frequencies of any signifiers of authority are likely to be similar regardless of site scale, and thus even relatively small sites could have been loci of authority. Should communities be specialized, specific 'sets' of artefacts from relevant 'worlds' will be associated with particular settlements (also applicable in the case of 'balanced centres' or a heterarchy of hierarchies). Finally, population would have been dynamic and relatively mobile, including relatively large numbers of short-lived 'one generation' settlements. A likely cause of this pattern would be autonomous social groups conflicting with some 'authority' and splitting from them, moving out to escape or in order to demonstrate competence and become an 'authority' in their own right (for examples see Ch. 3-i).

Again mirroring the expectations on the site scale, the widespread presence of spaces to gather and communicate is very likely. Such places may be generic plaza-type spaces where various types of communal action occurred, or there may be multiple types of meeting place, each associated with particular activities. In any case, some sort of open space or meeting place with non-restricted access is expected, where all participants may have potentially been able to see and/or interact with any other. Archaeological evidence will thus show openly and regularly accessed spaces with material culture associated with 'worlds' of authority detectable in other contexts. Such spaces may not necessarily be formalized or maintained; more makeshift spaces may also have been utilized in some instances, making them difficult to detect archaeologically. Despite this issue, repeated meetings and/or other activities associated with such a place would likely leave material evidence. Finally, meeting places are expected to be quantitatively similar in scale and the intensity of activities throughout a settlement or region. In other words, a ranked hierarchy of these spaces should not be obvious.

In two cases there may be exceptions. Firstly, in a heterarchy of hierarchies the meeting spaces will potentially be much smaller, as the number of participants will have been highly

limited. This issue makes detection very difficult indeed, but if other evidence for a heterarchy of hierarchies can be found the existence of such a meeting place (or places) is likely. The internal arrangement of such a space would reflect the nominally horizontal relationships among the heads of the various hierarchies, where all participants are in view of all others in a setting that masks differences or reinforces the relative equality of each person (e.g. nobody is raised above others, no variation in terms of quality material goods or food). A heterarchy of hierarchies differs from a confederacy in that a heterarchical group will be made of people with varied competences, with particular leaders emerging situationally; on the other hand, a confederacy will be oriented towards collective decision-making among similar socio-political units and actors.

The other exception is where individual households or household clusters were the focus of communicative exchange activities. Activities such as feasting would therefore be concentrated *inside* household clusters (discussed above).

2-iii-iii – Utilizing the Model

The following chapters will use this model of heterarchy and the expectations derived from it to investigate whether Mahan society was heterarchically organized (Ch. 3, 4) and whether the subsequent kingdom of Baekje had heterarchical elements (Ch. 5, 6). Both textual and archaeological evidence will be examined with reference to the expectations set out in this chapter, with the approach to the archaeological evidence outlined in Chapter 4. Thus, a worked case study is provided which employs a wide range of evidence and demonstrates the applicability of the socio-political model of heterarchy presented here.

Chapter 3

A Critical Examination of Mahan Social Organization as Portrayed in Ancient Chinese Texts

Having outlined a model of heterarchy and the kinds of social relations and organizational features associated with it in the previous chapter, it is now time to introduce said model to data. As discussed in Chapter 1, historical texts have had a profound impact on how Mahan and the subsequent emergence of Baekje are understood, with evolutionary sequences and chiefdom models providing the primary lens through which social organization and cultural process have been viewed. In an alternative approach, this chapter will reexamine texts relevant to understanding Mahan society from a position that does not assume the necessity or primacy of hierarchy or evolutionary progression *a priori*. Heterarchical relationships will often play some role in social organization (see Ch. 2-ii-ii), although such relations may or may not be the dominant form in everyday life or political decision making. I therefore start from a neutral standpoint, testing whether a chiefdom model (i.e. formal hierarchy) is appropriate and also considering whether there are obvious aspects of heterarchical organization. If the latter situation is common accounts of Mahan and expectations for the archaeological material will need modification.

Before addressing questions regarding the organization of Mahan socio-political relations the construction and reliability of the source texts must be assessed. Following a brief discussion of how we may identify heterarchical organization in texts, this latter issue is addressed in detail. The relevant texts are introduced and issues surrounding the creation of ancient textual accounts of Mahan are discussed, highlighting any subsequent implications any reading of these accounts needs kept in mind.

Records of Mahan exist as both independent "accounts 傳 (Ch. zhuan; Kr: jeon)" within established Chinese state histories and as references in some states' formal court records. The most detailed of these accounts, the *Account of the Han* 韓傳 (Ch. *Han zhuan*), appears in the *Account of the Eastern Barbarians* 東夷傳 (Ch. *Dongyi zhuan*) within the 3rd century *Sanguozhi*. Consideration of how and from where the information was likely gathered, how it was collated and filtered, and the cultural lens it was viewed through is carried out here. This work has not yet been done in detail with regard to the *Dongyi zhuan*, and is therefore not only informative for this specific analysis of Mahan, but necessary in its own right if we are to move away from simply taking these texts as-read.

Finally, a detailed analysis of Mahan leadership and social organization as seen through the *Han Zhuan* and other relevant texts is carried out. The analysis narrows in on several areas; namely, ranks and social positions, relationships among Mahan groups, between these groups and Chinese authorities, and interpersonal relations and practice. Elements of both heterarchy and hierarchy are identified, yet strong heterarchical organizational principles operated in Mahan, including high levels of autonomy and multiple axes of leadership. While the analysis of how ancient texts were written means that the nature of the textual evidence makes such conclusions hypothetical, the reexamination of textual evidence here provides a foundation for probing whether the archaeological data also supports a model of socio-political heterarchy (Ch. 4, 5, and 6).

3-i – Heterarchy and Text

The model of socio-political heterarchy outlined in Chapter 2 derived a number of expectations regarding groups that are organized heterarchically (e.g. a multiplicity of evaluative frameworks, a high degree of autonomy, situational leadership). In any society or

narrower community where heterarchical principles are/were the dominant organizational factor evidence will likely be visible within any textual accounts, be they historical or ethnographic. For example, Angelbeck and Grier (2012: 553-556) employ both colonial and modern ethnographic accounts of the Coast Salish (northwestern North America) to highlight the existence of multiple chiefly figures and that no one of these individuals could be recognized as paramount, and the fact that individuals with "elite" status outnumbered all other social groups. They also note that the general population held the great deal of autonomy, which facilitated much dynamism in terms of population movement. Angelbeck and Grier (2012) then use the information within the textual sources to form archaeological expectations and inform interpretations regarding how centralization was resisted and why elite status became so widespread.

Relevant texts indicate that Coast Salish social organization had strong heterarchical elements (also Angelbeck, 2016: 65). Various ethnographic works in South East Asia also offer examples of how heterarchical organization can be noted in texts, even those texts that are not specifically employing the concept of heterarchy. For instance, much work in modern day Myanmar and the surrounding highlands describes social groups *de facto* ruled by council consensus (e.g. Lehman, 1963; Leach, 1965: 184-90). The population here, while including chiefs and named positions of status, have the autonomy to simply move away from group leaders they disagree with (see A. Walker, 2003: 44; Yawnghwe, 1987: 82) or will drop their lifeways to move towards "charismatic" leaders elsewhere (Scott, 2009). In some contexts status and weight of influence on councils is based upon a general recognition of wisdom and wealth (Walker, 2003: 45), while in other accounts multiple 'worlds' of recognition and authority may be identified, with chiefs, priests and soothsayers each having their own spheres of action (see Leach, 1965). Indeed, for any position, "those who can *get themselves*

recognized as deserving these titles will have power and influence accordingly" (Leach, 1965: 194-5; my emphasis; also see Walker, 2003: 9-10). Such descriptions strongly fit the expectations of heterarchical organization and demonstrate the utility of textual accounts in studies of heterarchy.

Texts therefore offer starting points and supporting evidence for studies of heterarchy, but they are not neutral records of the past (Hines, 2004; Moreland, 2006). The nature of the societies that created them are reflected in the kinds of information past people wrote down (Moreland, 2006: 143-4). Considering the context of any record's creation is thus crucial. For example, when viewing Herodotus' account of the Scyths, not only must the culture of 'amusing' storytelling (Myres, 1953; Hartog, 1980) be taken into account, but also whether Herodotus directly observed any of the things he reports. Myres (1953) argued that the information is from stories gathered in the Greek Pontic states on the Crimean Peninsula; others have questioned whether Herodotus visited the Black Sea at all (Armayor, 1978). Similar points have been made of Roman accounts of "barbarians," revealing more about Roman attitudes than about the societies commented upon (Hingley and Unwin, 2005: 42) Mismatches between the archaeological and textual evidence can also reveal patterns of social power or further enlighten writers' priorities and assumptions (Halsall, 1997; Paynter, 2000: 15; Leone and Fry, 2001). For example, a review of various lines of archaeological evidence indicates that the polities or "tribes" noted in Roman records were not reflective of long standing ethnic groups but rather those political formations that were most successful at dealing with the Roman authorities (Moore, 2011: 349-51).

Any information in textual accounts is therefore contingent upon what specifically writers saw or sought to see, their particular worldview and/or conceptions of what was possible, and thus how the relevant texts themselves were created. Texts are material culture and part of

past social process (Halsall, 1997: 805; Moreland, 2006). Writers may impose certain orders or deemphasize (or miss) aspects of organization not recognized as valid, particularly those from highly ordered and stratified societies or those assuming the naturalness of formal hierarchies. Additionally, societies themselves may give accounts of themselves that mask underlying principles; for example Leach (1965: 194-5) notes that Kachin informants described a very strict hierarchy with a chief at the apex and rank determined by birth; yet he observed multiple offices of authority with dynamic and sometimes rapid social mobility. Any use of text must therefore be aware of such issues, and explicitly consider any limitations of sources. The following section, after an introduction to the texts, will address these issues in relation to our understanding of Mahan.

3-ii – The Chinese Histories and their Accounts of Korea: how much was known of Mahan?

Table 3-1 provides a summary of texts that provide information about Mahan and society on the Korean peninsula during the Late Iron Age (for relevant chronology see Table 1-1). The *Sanguozhi*, the *Hou Han Shu* 後漢書 (*Book of Later Han*), and the *Samguk Sagi* are the most heavily referenced in the context of Mahan. The *Jin Shu* 晉書 (*Records of Jin*) also notes the existence of Mahan and records historical interactions between Mahan and the Jin Imperial Court. For reasons set out below, the focus here is on the accounts in the *Sanguozhi*, although the *Jin Shu* will also be referred to in the analysis of Mahan society below.

Text	Author	Date	Scope	Translations
Weilue 魏略	YU Huan	Mid-Third Century AD	[only survives as fragments]	Barnes and Byington, 2014 (re: the Three Han)
Sanguozhi 三國志 Weizhi 魏書, Dongyi Zhuan 東夷傳, Han Zhuan 韓傳 *and* Bien chen Zhuan 弁辰傳	CHEN Shou	Late 3rd Century AD	1st Century BC – 3rd Century AD	P. Lee, 1993 (partial translation of *Dongyi Zhuan* re: Korean Peninsula) Byington, 2009 (re: the Three Han)
Hou Han Shu 後漢書	FAN Ye	5th Century AD	AD 6 – 189	Byington, 2009 (re: the Three Han)
Jin Shu 晉書	Various (court records)	7th Century AD	AD 265 – 420	Yi, 2009b (re: records of Mahan visits)
Samguk Sagi 三國史記	KIM Busik	12th Century AD	1st Century BC – 10th Century AD (purportedly)	Best, 2006 (re: Baekje)

Table 3-1: Chinese and Korean texts mentioning Mahan and discussed here.

The *Sanguozhi* is the only complete text that is contemporary with the Korean Late Iron Age and is split into three books and 65 volumes, 30 of which make up the *Weizhi* 魏書 (*Book of Wei*). As noted above, the text relevant to Mahan society is found in the *Dongyi zhuan*[1] section (a section from Volume 30 of the *Weizhi*) as one of nine accounts/chapters describing the peoples and states at or beyond the far eastern borders of the Later Han (漢)[2] (25-220 CE)

[1] Here I use the version from the Chinese Text Project: https://ctext.org/sanguozhi/30.

[2] In English the Chinese Han and the peninsula Han are indistinguishable, they are thus marked by their Chinese characters, '漢' and '韓' respectively.

and Wei (220-280 CE) Dynasties. The *Dongyi zhuan* makes significant reference to a mid-3rd century text called the *Weilue* 魏略 (*A Brief History of Wei*), a text that now only exists as citations in other texts (Gardiner, 1969; Ju, 2009). These accounts have been seen as holding ethnographic descriptions representative and informative of the various eastern peoples during the mid-late 3rd century CE (e.g. P. Lee, 1993: 7; Byington, 2009: 130; Ju, 2009; Barnes and Byington, 2014: 8; Seyock, 2014: 6), though others have stressed their vagueness (e.g. Nelson, 1993a; Davey, 2016)

The *Hou Han Shu* accounts of Mahan (and other eastern polities) heavily paraphrase or directly copy from the *Sanguozhi* (Ju, 2009; Barnes and Byington, 2014), despite some specific differences and contradictions. In the case of Mahan-Baekje history, the *Samguk Sagi* purports it stretch back to 18 BC, however there has been much debate about the reliability of the *Samguk Sagi*, especially in relation to the earlier records (see Ju, 2009). Its 12th century date means the information on the period of interest must be taken with a high degree of skepticism. This non-contemporaneity and the many issues with the earlier sections (see Best, 2006 for an in depth study regarding Mahan-Baekje; also Gardiner, 1969: 66; Ju, 2009: 107; McBride, 2011, 2015; Best, 2015, 2016) means that the parts of the *Samguk Sagi* purporting to date to the period in question cannot be taken as secure

3-ii-i – The Process of Writing History in China

Histories in Ancient China were documents effectively written by bureaucrats for the use of bureaucrats (Dubs, 1946: 31). These texts were written at administrative centres using state archives (Dubs, 1946; Loewe, 1979). No text can therefore be taken as fully primary. Authors of formal histories such as the *Sanguozhi* are therefore highly unlikely to have had much or any personal experience of the non-Chinese they write about (see Ju, 2009 specifically

regarding the *Dongyi zhuan*). These issues will have been exacerbated further via the processes of copying, printing and reprinting through time. In the case of the *Sanguozhi* there are three known versions. In reality they differ little, and the content remains unchanged, however in some cases there can be substitutions in characters or character order that change clause meaning (see Byington, 2009: 128-9).

The worldviews affecting what was selected for record and what was emphasized by authors also need to be acknowledged. A great many scholars prior to the start of the Han (漢) Dynasty (202 BC) positioned China as the centre of civilization, closest to heaven, based upon the primarily Confucian traditions passed down from the Zhou Period (c. 400-222 BC) (Wang, 1999; Pines, 2005; Brindley, 2015: 35-6). Non-Chinese were judged based on the similarity of their culture and practice to the Chinese centre (Wang, 1999; Lewis, 2010: 128-9; Brindley, 2015: 118-131). Prior to the Han (漢) Period there was some flexibility to this concept, with the focus upon explicit behaviour rather than fixed genealogy (Brindley, 2003; Pines, 2005). However into the Imperial Period (post-221 BC) this position became a firmer, less changeable dichotomy (Pines, 2005; Lewis, 2010: 133-4). Understanding of the 'other' thus shifted towards one based on 'blood' or ethnicity (Brindley, 2003: 24-9; 2015: 131-37), although reference points remain similarity or difference with Chinese 'propriety'. Finally, a trend that viewed a group's character and cultural behaviour as a direct result of climate and geography arose during the Han (漢) Period (Pines, 2005: 80-1; Brindley, 2003, 2015; also Meserve, 1982: 51). Such viewpoints persisted into the periods following the Han (漢) Dynasty (Wang, 1999: 298), and thus must be factored in to any reading of Chinese accounts of other cultures during this time.

We are therefore left with certain limitations regarding the account of Mahan given in the

Sanguozhi, which must prompt important considerations when attempting to interpret the text. The versions available today are not originals, likely being copies of copies, with slight differences between them. It cannot therefore be known how far these versions resemble the original, although the general concurrence between the various versions regarding the core information may give some confidence in terms of their faithfulness.

Additionally, despite the original text being contemporary with the period in question, the account is likely based primarily on dispatches from the frontier or military/trade expeditions. The account is a compilation of eyewitness accounts from specific circumstances and reports sent back to the centre by an outpost that was itself geographically removed from the society of interest (see Fig. 1-2). Any reports were subsequently filtered into state archives through a complex bureaucracy, only to be filtered further via the selections and wording used by Chen Shou, the overseeing author.

The worldview and prevailing ways of thought during the Later Han (漢) and Jin Dynasties would not only have affected the choices made by Chen Shou but also the reports by frontier officials, potentially leading to over- or under-emphasis of actions or structures in particular types of activity. A core guiding concept would have included judgement of how close an 'other' may be towards the Chinese ideal of propriety. An important aspect of such Confucian 'propriety' relates to natural or ideal forms of relationships between various categories of person (wife-husband, ruler-ruled, parent-child), very likely leading to assumptions regarding the structure of non-Chinese groups; for example the 'natural' presence of ruler-ruled in a vertical power relationship (see Yao, 2000: 32-35).

The deep rooted official bureaucracy (also somewhat justified by Confucian values) will also have framed notions of the way a society 'should' operate. Chen Shou and the frontier

reporters would likely have assumed the presence of an ultimate leader for any group, a leader that sat atop a pyramid-type structure. State and imperial bureaucracies will also assume and aim to identify particular individuals of authority to negotiate with and hold to account, regardless of how the target group is internally organized (Scott, 2009; 2017). As discussed previously however, such formally hierarchical structures cannot be taken for granted, and therefore any interpretation of the texts must take into account the tendencies highlighted here.

Such issues present serious challenges and restrictions when interpreting and utilizing Ancient Chinese texts. The content is not primary material and has gone through multiple stages of filtering, both via a bureaucratic system and a particular conceptual framework. Furthermore, the *Sanguozhi* account of Mahan is effectively the only contemporaneous source that offers any detail about this society. The text is therefore evidence that is highly deficient by any rigorous standard. Yet this does not mean that no useful information can be obtained, even though little can be firmly concluded. The information in the Chinese accounts clearly derives from genuine experience of Mahan, presenting information otherwise hidden to archaeologists.

The interpretation I offer here therefore offers a best-fit to the available evidence, offering hypotheses for archaeological work rather than any concrete conclusion. Such conclusions would be unsupportable considering the nature of the available texts. Few scholars (if any) have explicitly delved into such issues when looking at the Chinese accounts of the Korean Peninsula during the Late Iron Age; the analysis here is therefore long overdue.

3-ii-ii – The Account of the Han 韓傳 (Ch: Han zhuan)

As noted above, the *Han zhuan* is one chapter of *Dongyi zhuan* in the *Sanguozhi*. It is

accompanied by accounts of polities and groups from Manchuria, the northern Korean peninsula, the Tumen River basin, southern Korea and south-western Japan. The text describes three types of Han (韓) people existing to the south of the Chinese Han (漢) commanderies[3] in the northern half of the peninsula; Mahan to the west, Jinhan to the east and Byeonhan in the south (see Fig. 1-2). The account can be divided into three sections. The first holds information specifically about the Mahan economy and political structure, along with a list of 55 'guk' (國), which may be seen as polities (see below for discussion). The second (heavily leaning upon the *Weilue*) notes four dated (alleged) historical events directly related to the Han (韓) occurring between the 2nd century CE to the mid-3rd century AD. This section gives some insight into interactions between the Chinese commanderies and Han (韓) groups. The final section holds information on Han (韓) practices, including seasonal and mortuary rituals.

3-ii-iii – The Meaning of 'Guk' (國)

Before going any further a clarification of the character 'guk (國)' is required. In modern Korean, Chinese and Japanese the character '國' generally means 'nation' or 'state,' and in earlier work each Mahan 'guk' was assumed to have been a state (also see Barnes, 2001: 3-6). This position has been rejected by both O-Y. Kwon (1996) and H-j. Lee (2000), who note that '國' did not necessarily mean 'state' in the past. Byington (2009) translates the character as 'polity,' while Tsunoda and Goodrich (1951), regarding the Wa, prefer 'community.' Wieger

[3] 'Commanderies' were administrative centres and/or colonies set up on both the frontiers and within the Han (漢) Empire (see Loewe, 1979; papers in Byington, 2013b). Four commanderies were set up in southern Manchuria and northern Korea after the conquest of Old Choson in 108 BCE.

(1965: 177) sees the original meaning of '國' as "[a]n estate, well defined and surrounded with marks." Kroll (2015: 149) states that during the Han and Western Jin dynasties '國' indicated "a territory under governmental control," but could also simply mean "girtland, territory."

'Guk (國)' can therefore refer to a variety of different social formations, from *bona fide* states to small communities. Yet, the existence of a marked territory and some method of governance is clearly implied. The specific implications of the use of this term in the *Sanguozhi* to refer to the groups making up Mahan are discussed below, but here I take 'guk' to signify a polity or some bounded political community.

3-ii-iv – How accurate is the Han zhuan?

With accounts in the *Dongyi Zhuan* being at best secondary reportage, it is imperative to think through how much the commanderies or other expeditions knew of the people they were reporting about and how this information may have been gathered. Before attempting to interpret the text an assessment must be made regarding how far the information is generalizable and actually reflects Mahan lifeways and forms of political leadership.

An account of 49 polities ("國") at the Earlier Han (漢) (202 BC – AD 9) western frontier recorded in the *Han Shu* 漢書 (*Book of Han*) provides an example for comparison. The *Han Shu* became one of the models for later histories (Dubs, 1946), and the *Dongyi Zhuan* follows its basic layout. Chapter 96 gives a list of polities and detailed information about them based on reports from the local commandary (Loewe, 1979: 10-11, 64; see Hulsewé, 1979 for English translation). The text contains population information, information on fighting men, and locations (amongst other things).

In most areas the *Han Shu* accounts hold far more detail than those found in the *Dongyi zhuan*. Detailed accounts of 'guk' as small as a few hundred or a few thousand people are given in the *Han Shu* record. For many of the listed 'guk' the *Han Shu* gives exact figures (to the person) for population numbers and/or military strength; the latter of which is broken down by role, detail absent from the *Dongyi zhuan*. More pertinent, the *Han zhuan* is extremely vague in comparison, offering only a long list of 'guk' that is absent of specific demographic and locational information.

This discrepancy is likely due to the different relationships between the Han (漢) commanderies and the respective western or eastern polities and groups. The role of these Imperial commanderies was not necessarily to rule over or weaken local groups but to act as an authority that provided mediation or protection (Loewe, 1979: 64-5). Coming under the direct protection of the commandery would entail a requirement to pay tax through labour, and thus be subject to the household census. For example, a household census dated to 45 BC from the Lelang Commandery (see Byington, 2013a: 298-305; B. Kim, 2013: 264-5) demonstrates that these administrative centres did have very detailed population figures for each directly controlled district. Referring to the 45 BC census, B. Kim (2013: 180) argues that the Lelang Commandery did not project direct control outside of its core area, and even there "complete control could not be attained." Much of the information in the *Dongyi zhuan* regarding population, governance and location will therefore have been gathered via visits to a commandery[4] by local people, leaders or officials, or visits to specific places by commandery officials.

[4] In the early 3rd century the Daifang commandery was founded to deal with the south, while Lelang dealt with the north.

Only three specific references describe visits by Lelang officials to Han (韓) territory; i.e. only three out of a total of 78 ‘guk’ are recorded as having ever been visited (and two of these relate to Jinhan and/or Byeonhan). Visits by Han (韓) people to the Chinese commanderies are recorded as being frequent, actively coming to the commandery seasonally in order to pay ‘tribute’. No information is given regarding whether representatives of all ‘guk’ made this journey or simply a subsection. There is therefore circumstantial evidence that the majority of contact is predicated upon people of Mahan travelling to the commanderies, with official delegations or expeditions into Mahan by Chinese officials being far less frequent. From this evidence, and the piecemeal or vague nature of the *Sanguozhi* accounts (see below), much of the information recorded in the *Han zhuan* appears to have come from stories told by visitors to the commandery, augmented by observations made during specific visits to specific places by Chinese officials.

Table 3-2 highlights the uneven and variable nature of the information offered in the *Dongyi Zhuan*; predictable if it was gathered in the piecemeal way suggested above. The table classifies ethnographic information as ‘detailed’ (e.g. an apparently in depth description of burial practice) or ‘piecemeal’ (e.g. the fact that horses and cows are used exclusively for mortuary practice). Key details regarding Mahan are patchy, and are not as comprehensive as for groups like Buyeo, Goguryeo and Wa (Japan). Whether this contrast is due to a lack of information or a lack of interest in the Han (韓) groups, either on the part of the commandery reports or the author of the *Dongyi Zhuan*, is impossible to say. Either way, supposition that the *Han zhuan* was primarily based upon reports of visits to particular parts of Han (韓) territory at infrequent time intervals, along with stories told by Mahan visitors to the commanderies, again appears reasonable.

Group	Politics / Stratification	Clan / Lineage System	Laws	Marriage	Mortuary Practice	Ritual	Clothing
Buyeo							
Goguryeo							
Eastern Okjeo							
Eup-nu							
Ye							
Han / Mahan							
Jinhan							
Byeonjin							
Wa							

Table 3-2: Records in the *Dongyi Zhuan* regarding specific aspects of society classified by whether they are detailed (black), piecemeal (grey), or absent (white).

The most detailed accounts are for Goguryeo and Wa (see Table 3-2), which reportedly had the most active contact with Chinese authorities either through tribute and formal gift exchange (Goguryeo, Wa) or open conflict (Goguryeo). The implication here is therefore that the richness of information is related to regularity and mode of direct contact. The account of Byeonhan/Byeonjin is also relatively detailed, despite being a short entry, likely because the position of one 'guk' on lies the sea route to Wa, providing a regular point of direct contact. The likelihood that missing information is due to cultural aspects having been the same as in China, and therefore not noteworthy, is implausible; it is difficult to see how non-Confucian societies that know little-to-nothing of Confucian 'propriety' could take a form significantly resembling Chinese custom. Additionally, some knowledge of recognizable ritual propriety is noted in the accounts of Mahan.

The account is clearly based upon some direct observation; details of topography, flora and fauna, social practice, and the sea route to one Byeonhan port attest to this fact. However, these specifics highlight the vagueness in other parts of the record. The list of 55 'guk' in the first section of the *Han zhuan* is almost devoid of information when compared with the Wa account. Locations are unspecified and no indication is given of whether an individual 'guk' is large or small. The numbers given to qualify large and small are very general, being "about 10,000 (萬餘)" or "a few thousand (數千)" households respectively. Known information again appears piecemeal and reliant upon Han (韓) stories and/or broad estimates derived from limited direct experience.

It is also possible to question whether all of the listed 'guk' can be taken as polities. If these names are noted via 'tribute'/trade interactions with the commanderies then confusion is conceivable, especially if direct experience is lacking on the part of the Chinese administrators. In addition, in ethnographic examples regarding alliances and confederacies

political units tend to be very flexible, with names of alliances or settlements, leaders, and main actors changing relatively rapidly through time (e.g. Dani - Heider, 1970; 1972; 1997; Lahu – Walker, 2003: 9-10; Nuer - Evans-Pritchard, 1940). Therefore, in addition to the possibility that non-territorial unit names were recorded (e.g. alliances/confederations, clans, personal names of leaders), the list in the *Han zhuan* may also record named political formations that no longer existed at the time of writing/collation.

A number of the problems highlighted above can legitimately be labeled as speculative, however they prompt us to reconsider the reliability of the information on Mahan held in the *Dongyi Zhuan*, and think about possible alternative conditions. Strong circumstantial evidence indicates that the Chinese account is based on piecemeal information from a limited number of places and stories from told by people from a society that the reporters may not have fully understood. Such issues must limit the generalizability of the information given. There are no solid grounds to view the representation of Mahan in the *Sanguozhi* as definitive or proven; i.e. the account cannot be taken-as-read. However, this situation does not mean that the text should be discarded, merely that the biased nature prompts hypothesis-making rather than conclusion-making. The section below takes these issues into account and presents a reinterpretation of texts relevant to Mahan, specifically asking whether heterarchical or hierarchical organizational principles can be identified, and in what fields of action such principles operated.

3-iii – Re-evaluating Mahan leadership and society through text

Models of Mahan social organization during the Late Iron Age tend to make heavy reference to one or several of the historical texts mentioned above (see Ch. 1; Blackmore, 2019 – for review of early work see Barnes, 2001: 3-6, 27-31). The use of terms that appear in the

Sanguozhi, such as 'statelet' (小國), settlement group (邑落), or capital settlement (國邑)[5], is common when building archeological models (e.g. Kwon, 1995; Lee, 2000; Yi, 2009b; S-o. Kim, 2014), and attempts to identify particular 'guk' (e.g. for 'Mokjiguk' see review in M-L. Choi and G. Kim, 2005: 75-9) or define the locations/territory sizes of 'guk' (e.g. Yi, 2009b; S-o. Kim, 2014) are also trends. It is also now accepted wisdom that the state of Baekje (百濟) is the same entity as the 'guk' of Baekje (or Paeje) (伯濟國) mentioned in the *Han zhuan*, with this one polity having subdued or subsumed those surrounding it (e.g. Park, 2001a; Kwon, 2008; Yi, 2009b; Song, 2010).

References to leaders in the texts have been taken to indicate traditional chiefs, with assumptions that the representatives interacting with the Chinese commanderies were "chiefs" (e.g. Barnes, 1986, 2015; Pai, 1992), and work focused on "representative chief burials" (Lee, 2012: 75). The theorized presence of a 'chiefly' society includes an assumption of hierarchical social structure, with references to leaders or 'chiefs' in the Chinese texts taken as proof. While the Korean literature has not adopted the terms of "simple" or "complex" chiefdoms (Steponaitis, 1978: 419-21; Wright, 1984: 42-4), Mahan polities are often envisaged more as complex chiefdoms, with multi-tiered site hierarchies (Lee, 2000; Park, 2001a), centralized bounded territories (Kim, 2014), engagement in regional exchange and elite subculture (Barnes, 1986, 2001; Pai, 1992), or the ability to delegate specialist social ranks (Yi, 2009b; Moon, 2017).

Hierarchical settlement patterns have been proposed, with each 'level' having a singular head

[5] These terms are variably translated into English. I have favoured the meanings and nuance in the Korean archaeological literature, but Byington (2009), for example, translates these as 'polity,' 'village,' and 'central township' respectively.

(either individual, family or clan) and clustering under the level above (e.g. Kwon 1995; Lee, 2000). Such models (particularly Lee, 2000) strongly resemble those set out by Steponaitis (1978), further underlining that the vision of the Han (韓) groups is one of complex chiefdoms. Yet there are no descriptions of how these different places are structured in the texts, and therefore such models have little grounding (also see S. Lee, 1998: as cited in Davey, 2015). The labels of "chiefly burials" or "elite" settlements are thus simply applied to those archaeological sites that fit expectations.. Also, as discussed in Chapter 2, such schemes conflate scalar and formal hierarchies. Few attempts have been made to examine the evidence using a framework other than the classical chiefdom.

Some scholars (e.g. Jaehyun Lee, 2009; Yi, 2009b) acknowledge that "chiefly" power was limited and that the various 'guk' were effectively independent, yet go no further. Acknowledging the role of non-hierarchical or heterarchical relations is therefore likely to be fruitful in filling in these gaps. A take-it-as-read approach to texts may mistake Chinese assumptions of how a society *should* be structured for the way it really was structured.

3-iii-i – Hierarchy and Heterarchy in Mahan Society

The approach taken here to analyze the *Han zhuan* and other relevant texts is a more traditional hermeneutic one, a discussion of the most plausible model given the available evidence (e.g. see McCullagh, 1984: 4-43; Howell and Prevenier, 2001: 69-118). Other chapters of the *Dongyi Zhuan* will provide some context to what the author emphasizes or knows about particular aspects of each society. Setting the discussion in the context of the entire *Dongyi Zhuan* may prompt modifications to hypotheses and assumptions. In order to assess Mahan social organization in detail, and in various fields of action, the discussion here is organized into sub-sections focused on certain terms or aspects of social life.

(3-iii-i-i) The ‘Guk’ (國)

As discussed above, references to the ‘guk’ (國) of Mahan were initially taken as references to fully formed states, yet there is no archaeological evidence that state societies existed in the southern Korean Peninsula at this time. The model of Mahan society (and that of the two other Han 韓) therefore shifted towards one of multiple chiefdoms (e.g. Lee, 2000; Yi, 2009b). As noted in Chapter 1, the lack of evidence for state societies appears to have simply prompted the Mahan polities to be labelled as the next ‘stage’ down (i.e. as chiefdoms), with the question of whether an evolutionary typology is applicable going unaddressed.

Despite such issues, the labeling of these groups as ‘國’ gives insight into how the Chinese saw them. Mahan groups were viewed as being clearly defined territories, with each having some system of organized governance. In contrast, the descriptions of Ye, Eup-nu and Eastern Okjeo (see Fig. 1-2) describe each settlement as having their own head or leader, with no one overall authority. The character ‘國’ is not used in any of these three chapters, although this may be an artefact of having different authors in different regions.

A distinction is also made between capital or central settlements (國邑) and regular settlements (邑落), thereby suggesting some sort of settlement hierarchy. Yet no descriptions of what either of these settlement types looked like are given. No statement is made about whether the central settlement is a permanent seat of authority or whether it is “central” simply because the current authority sits there. Little evidence therefore supports an assumption of qualitative difference. Yet, the text makes clear that the Chinese see a polity leader situated in a particular settlement, even though the amount of formal control this individual had is not entirely clear.

The Mahan groups experienced by the Chinese therefore had some form of organization that appeared recognizable in terms of governance over a specific territory. The precise organization is unclear however. In a Confucian worldview, which dominated from the Earlier Han (漢) Dynasty (Yao, 2000: 81-86; Li, 2013: 310), such a governance structure would have been hierarchical and bureaucratic, with a series of officials fulfilling specific roles and a clear figure as the organizational head[6]. Considering that the Chinese measured others based upon their closeness to the Chinese Confucian ideal, the presence or absence of "proper" structures is likely to have been specifically sought out to note.

Additionally, the records from the commanderies represent those from what was, to an extent, a colonial power. They would have needed to identify local 'leaders' to work with and hold to account. Native leadership would therefore have been interpreted through bureaucrats' own conceptual lens, looking for recognizable organizational properties and potentially creating "chiefs" where they did not exist and exaggerating their power (see Scott, 2009: 113-4, 208-9). Scott (2009: 213) notes that many local leaders or chiefs identified by the Imperial British authorities in South East Asia were often proxies for some other actor, or were individuals with little influence pushed forward because elder councils had little interest in dealing with colonial authorities. Thus, how far the textual portrayal of these 'guk' reflects an imposition of order and how much it represents the reality needs to be borne in mind.

(3-iii-i-ii) Ranks and social positions

Multiple terms relating to social position and rank are used in the *Han zhuan*. These can be split into three types; native terms, adopted Chinese terms, and Chinese terms describing the

[6] See Yao (2000: 32-35) for a discussion on the hierarchical assumptions of Confucianism.

local situation. The first and last type will be discussed here because the middle type relates to interactions between local Han (韓) groups and Chinese commanderies, and will be discussed below.

Sinji (臣智) and *Eupcha* (邑借)

The most commonly discussed native terms, and those that have, in part, prompted the application of the classical chiefdom model, are *sinji* (臣智) and *eupcha* (邑借)[7]. The text says that each 'guk' has a '長帥' (Ch: *zhǎng shuài*), a term that Byington (2009) translates as "chieftain" but could also signify head or leader. The "greater" (大) ones are *sinji* and "those after" (其次) are *eupcha*. Many interpret this information to mean that the *sinji* head the larger polities and *eupcha* the smaller (e.g. Ju, 2009: 102). Regardless, *eupcha* is not used again in the rest of the account.

According to the account, individuals '*call themselves*' as *sinji* (大者自名爲臣智 – my emphasis)[8], with the same translation made by both Byington (2009: 133) and in P. Lee (1993: 21). This phrase also appears in another context relating to external officials encountered by the Chinese; individuals sent by the Wa polities to the Chinese in order to exchange tribute "call themselves grandees (自稱大夫)."[9] It is therefore possible that this formulation is used in the context of 'officials' that Chinese officials experience as *coming to them*.

If the majority of *sinji* were experienced and recorded in this way it might go some way to

[7] These are the modern Korean renderings.

[8] *Sanguozhi*, *Weizhi* Vol. 30, *Han zhuan*

[9] *Sanguozhi*, *Weizhi* Vol. 30, *Han zhuan* - Tsunoda and Goodrich (1951) make the same translation.

explaining why there is merely a long list of 'guk,' devoid of specific locational and demographic information. While *sinji* may have been good sources of information about their own polities, records coming from a multitude of people coming from locales and geographies unknown to the Chinese administrators at different points in time would have resulted in a mass of contradictory and confusing records. The compliers of the *Dongyi zhuan* may therefore have glossed over ultimately incomprehensible recording (if the records were not simply lost). Alternatively, such details were not deemed relevant by the Chinese authorities in the first place, the Han (韓) being scattered smaller groups, unlike polities that had more formal relationships with China (e.g. Buyeo, Wa, Goguryeo).

We are also told that "*sinji* sometimes add superior titles (臣智或加優呼,)[10]." The passage specifies that the titles are added not granted, giving at least two examples[11] that have no parsable translations and are likely transliterations of native language. Again, such a formulation may signify that these are people recorded as coming to the commanderies to declare themselves, with the origins of the titles unknown. Either way, a degree of flexibility and a wide variety of possible positions are evident, even if we cannot be sure of the origins or meanings of these.

No *sinji* are linked to any specific families, nor is the position stated to be generationally held. The Goguryeo account makes clear that there were several 'great families' (大家) (and others)

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[10] *Sanguozhi*, *Weizhi* Vol. 30, *Han zhuan*

[11] 'Sin Ungyeonjibo Anya Cheokjibun (臣雲遣支報安邪踧支濆)' and 'Sin Iaburye Kuya Jinji Yeom (臣離兒不例拘邪秦支廉)'; there may be multiple ways to interpret these, but their meanings are unknown (see Byington 2009: 134-5; footnote 6).

holding certain titles. Phrases related to Eastern Okjeo settlement leaders specifically state that leaders were "hereditary (世世)" (see Lee, 1993: 19). For one of the 'guk' in Wa it is again noted that it "had a hereditary king (世有王)[12]" (also Tsunoda and Goodrich, 1951: 9). In the cases of *sinji* or *eupcha* no such remarks are made. The reporters may have simply not known, but commandery officials did have long term contact with at least a few of the Han (韓) 'guk,' and therefore the absence of this information is notable.

Lord of Heaven (天君)

A third position named in the text is the 'Lord of Heaven' (天君), a title rendered in Chinese rather than transliterated. The role is specifically ritual, in that "each capital settlement raises up one person as master of sacrifice to the heavenly spirit(s) (國邑各立一人主祭天神)[13]." Both H. Yi (2009b) and Moon (2017) argue that this passage indicates that "chiefs" in the capital towns delegate ritual authority to some other individual. However it is not stated that *sinji* or leaders appoint the Lord of Heaven but that they are raised up by/in the capital settlement. This passage is from the third section of the *Han zhuan*, thus this report is likely the result of some direct observation and contact. Should the 'Lord of Heaven' have been close to the *sinji* we might expect it to have been noted. Instead the "settlement" appears to appoint this figure, suggesting a different form of administration to that argued by H. Yi (2009b) or Moon (2017).

The Lord of Heaven does not appear to be a heritable position but an appointed one, with appropriate figures being selected from the community. The fact that Mahan groups had

[12] *Sanguozhi*, *Weizhi* Vol. 30, *Wa-in zhuan*

[13] *Sanguozhi*, *Weizhi* Vol. 30, *Han zhuan*

central settlements, held to be distinct from the rest, is also reconfirmed. However, again, how those settlements were defined, how they may be distinct from the others, or whether they are permeant seats remains obscure.

The Jin King (辰王)

The final native title to be discussed is that of the Jin King (辰王). It states that the "Jin King rules/governs Wolchiguk (辰王治月支國)[14]," one of the 55 polities listed at the start of the *Han zhuan*. Byington (2009: 134) translates as "governs *from* the polity of Wolchi" (my emphasis), thereby implying that this position is a general authority rather than one limited to Wolchi. My translation is more literal, but the latter is the more common meaning (Byington, per. comm.). The Jin King is not mentioned again in the rest of the account but is discussed in the account of Byeonjin.

The *Account of Byeonjin* 弁辰傳 (Ch: Bien chen zhuan) from the *Dongyi zhuan* states that "their twelve polities belong to the Jin King (其十二國屬辰王)," a position that "commonly uses men of Mahan to serve as [the Jin King](常用馬韓人作之)" and who "follow each other generation after generation (世世相繼)[15]." An intuitive disconnect exists between the Jin King "commonly" being a Mahan person and the position being hereditary; if the latter were the case it might be expected that the Jin King was *always* a Mahan person[16]. The text goes

[14] *Sanguozhi*, *Weizhi* Vol. 30, *Han zhuan*

[15] *Sanguozhi*, *Weizhi* Vol. 30, *Bien chen zhuan*

[16] For comment on possible bilateral kinship in early Korea see Deuchler (1992: 29-87).

on to say that "the Jin King cannot set himself up as the king (辰王不得自立為王)[17]," which could mean one of two things (or both); (i) that the position of 'Jin King' can only be attained by those chosen, or (ii) that absolute kingly power cannot be attained based on this title alone. The first possible meaning contradicts the passage regarding the heredity of the position, while the second prompts doubt about how far these 12 polities "belonged" to the Jin King.

The relevance of this rank-title to the political workings of Mahan is hard to tell, but it would appear to be a role related to Byeonjin. The necessary link to Mahan's Wolchiguk must also not be taken for granted because there is no specific mention of it in the more detailed Byeonjin account of the Jin King. The position seems to have had little authority of note. The kings and ministers of other peoples were usually of special interest to the writers of the *Dongyi Zhuan*, yet the *sinji* of the various 'guk' were of far more interest here, able to make their own alliances and independently manage relations with the Chinese commanderies and mainland.

'Chiefs' and 'Leaders'

In multiple cases the text simply uses a Chinese variant of "chief" or "leader". Three such terms appear in the *Han zhuan*; 'chang-su (長帥)', 'geo-su (渠帥)', and 'ju-su (主帥)'[18]. The first two appear to be used interchangeably to refer to a settlement or 'guk' leader. Between the *Han zhuan* and the *Bien chen zhuan* the same formulation is used to give identical meaning, using 'chang-su' in the former ('各有長帥') and 'geo-su' in the latter ('各有渠帥'). This interchangeable use occurs elsewhere in the *Dongyi zhuan*, but is restricted to Eastern

[17] *Sanguozhi*, *Weizhi* Vol. 30, *Byeonjin zhuan*

[18] These are rendered in Romanized modern Korean.

Okjeo, Ye and the Han (韓) groups. This may be due to who is doing the reporting or because of similar traditions of leadership.

Byington (2009) translates all three of the above terms as "chieftain". O-Y. Kwon (1995) however identifies 'ju-su' as indicating a higher status. He does this through a passage that mentions 'ju-su' in the context of capital settlements, assuming that 'geo-su' are minor leaders. Understanding the context of this phrase is difficult because it is the only use of 'ju-su' in the entire *Dongyi Zhuan*. The term is used in the *Sanguozhi* just one other time, and appears to refer to a military commander[19]. Making any strong inference about differences in power or position is therefore problematic.

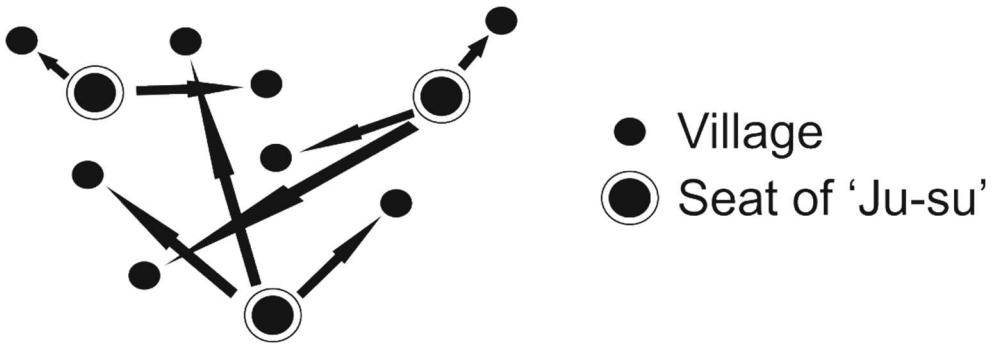

Figure 3-1: Schematic view of possible meaning of 'scattered', 'mixed' or 'variegated' villages linked to particular central townships under a 'Ju-su'.

Following the phrase regarding 'ju-su' in the capital settlement, the text states that (following Byington, 2009: 142) "their villages are all scattered, so [the ju-su] cannot readily exercise

[19] 4th Chapter of Wei.

control over them (邑落雜居不能善相制御)[20].” This statement prompts doubt about how much authority these central chiefs or leaders really had. The character ‘雜’ (Ch: zá) is also interesting because, although it can mean scattered, the meanings typically revolve around ‘mixed,’ ‘diverse,’ ‘mingled’, or ‘variegated’ (Kroll 2015: 582). This may indicate that villages belonging to different capital towns are intermingled, with authority at the central settlement based on something other than territoriality (e.g. see Figure 3-1). The *Dongyi zhuan* informs us that in Wa, a culture with many similarities to the Han (韓) polities (see Barnes, 1986; Seyock, 2014), each clan has its own ritual and gatherings. Influences of clan or lineage systems cannot be overlooked, and the picture of a central “chiefly” settlement surrounded by subordinates cannot be assumed via this portion of text.

The terms *sinji* or *eupcha* are not used in these passages, which could indicate that individuals leading ‘capital settlements’ need not have either of these titles. Alternatively, the fact that use of these terms in the *Han zhuan* is almost fully restricted to the historical or ethnographic sections may suggest that author did not know, using reports from isolated encounters by unknown (and now unknowable) actors. Finally, it may be that the text is referring to two different systems, one political and one clan based. If these references are talking about the workings of kin groups then this is something missing from the rest of the account. If they are referring to *sinji* then *sinji* would appear to have little firm authority over their territory or the people in it.

‘Lower Households’ (下戶)

Among the accounts of the leadership positions one reference is made to ‘下戶’ (Ch: xià hù),

[20] *Sanguozhi*, *Weizhi* Vol. 30, *Han zhuan*

which has the literal meaning of "lower households." Byington (2009: 141) proposes this to indicate "commoners," people that were not members of the ruling classes (also see Park, 2010: 38-9). The term appears elsewhere in the *Dongyi Zhuan* and relates to those under some leader (be that one person or a great family) and with a lesser status. Only in the case of Buyeo the fact that they are slaves is explicitly put in the text, and therefore this meaning is not likely to be the one commonly held. For Mahan this term likely indicates the general populace, although the flexibility in titles and leadership makes it difficult to theorize what "general populace" might mean. This is particularly obvious if we note the apparent autonomy these people have in dealing with the Chinese commanderies (discussed below). The Chinese clearly identified a non-ruling portion of the population; again however, how far this may be a result of their expectations regarding social structure or assumptions about the leaders they were in contact with is unclear.

(3-iii-i-iii) Interactions between Mahan and the Chinese

Various records exist of trade/tribute, diplomacy, and conflict between Mahan groups and the Chinese. We are told that "during the Han (漢) Period [the Han (韓)] belonged to Lelang Commandery, each season they would come to pay respect (漢時屬樂浪郡四時朝謁)[21]." This payment of respect could be taken as a relationship of control, but the nuance of the character also includes the seeking of an audience with a superior with a view to advancement (Kroll, 2015: 540). 'Belong' (屬) in this context simply indicates the point of contact between non-Chinese groups and the Imperial authorities (Byington, per. comm.). Considering that the Chinese portrayed themselves as inherently superior, it is highly probable that frontier groups were freely coming and going in their interactions with the

[21] *Sanguozhi*, *Weizhi* Vol. 30, *Han zhuan*

Chinese, making token gestures for the privilege of access.

Payments of "respect" such as these may be seen as part of the tribute system; yet a formal tributary system did not become fully developed until the later Chinese dynasties (i.e. schedualized and ritualized visits to the Imperial court to affirm Chinese superiority), involving more *ad hoc* payments and relationships to facilitate trade during earlier periods (Lewis, 2010: 145-6). This system provided Chinese goods, official ranks, seals and clothing to the local people in exchange for local goods. Five Chinese titles, likely conferred by the Wei administration (Byington, 2009: 135; footnote 7), are listed as Mahan "offices" or "officials," being discussed in a separate section from the native terms discussed above. These titles' impact on the population is unclear however because they are not mentioned again. However, as noted above, that the holders of such foreign titles actually have high influence within their societies cannot be taken for granted. Such people may instead have been subordinate to some other native authority.

Two other Chinese titles are mentioned later in the text. Seals and ribbons for 'Fief Lords (邑君)' were bestowed upon various Han (韓) *sinji*, while those said to be below them or 'next' (次) are given the items for 'Fief Leaders (邑長)'. Byington (2009: 140) specifically notes the latter were "subordinates" of the *sinji*. This record relates to the mid-3rd century, and long term contact may indeed have prompted the development of some more institutionalized hierarchy. However, issues such as the unknown basis of the *sinji* position, the fact that by this time the most intensive relationship appears to be with the qualitatively different south-eastern area (see Ch. 1-i-ii), and the flexible relationship between Mahan groups and the commanderies cannot be ignored. Such features make it less easy to assume a strict hierarchical system or whether the Chinese experience relating to this specific record is generalizable.

A record about the lower households going to pay respects to the commandery highlights a trade relationship and the autonomy of Mahan people. The text reads that "[they] all borrow/forge robes and hats (皆假衣幘)[22]." The character '假' indicates either 'forge' or 'fraud', or the act of 'borrowing' or 'temporary use' (Kroll, 2015: 193)[23]. The correct reading is unclear, but both prompt questions. The former would indicate that there was little regulation regarding access to the proper paraphernalia with which to engage with the Chinese officials; that "faking" your way into an exchange relationship with the Chinese commandery officials (i.e. 'pay respects' via tribute exchange) was possible and acceptable. The latter meaning prompts the question of from whom these items were being borrowed, and whether these items were shared among Han (韓) people. In either case, these common people had the rights and resources to make the long trip to the commanderies and then to engage in official exchange.

The passage further states that "there were more than 1000 that came with their own seals, ribbons, clothes and hats (自服印綬衣幘千有餘人)[24]." As noted above, seals and ribbons were bestowed upon people by the Chinese to signal some recognized rank in the Chinese imperial system, giving some recognized point of official contact and relationship. The items are linked in one phrase, with these people coming "carrying" all items rather than, for example, some with hats and ribbons and others with seals and clothes. In the context of the

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[22] *Sanguozhi*, *Weizhi* Vol. 30, *Han zhuan*

[23] Byington's (2009: 141) translation uses the verb 'make', however the nuance was intended to be closer to 'forge' rather than simple manufacture (Byington, per. comm.).

[24] *Sanguozhi*, *Weizhi* Vol. 30, *Han zhuan*

immediately prior passage regarding clothes and hats, and the fact that the commoners wearing such clothing were engaging in tributary relations with the Chinese, such "official" seals and ribbons may also have been borrowed/forged. In her translation of the passage, Seyock (2014: 10) also indicates that these people "accredited themselves" with such items. If common people were borrowing/forging official ribbons and seals the prestige of Chinese titles is questionable. Again, 'common people' were not prevented from engaging in relations with the commanderies. Access to the goods provided by the Chinese commanderies therefore does not appear to have been fully monopolized by individuals with titles, nor did these individuals have the authority to stop 'commoners' acting in this way.

In a wider context, the *Jin Shu* lists a series of missions by Mahan polities to the Jin court between 276 and 291 CE. In all but two cases no 'guk' are named. The number of polities recorded varies widely between two and 30, but the two largest come recorded as "Sinmi and other guk (新彌諸國)." Due to the presence of rich tombs in the Yeongsan River region, Sinmi has been proposed as the leader of a confederacy here (Yi, 2009b: 48-51); however no direct evidence exists linking this area with this polity name. Indeed, Sinmi does not appear in the list of guk in the *Han zhuan*, thus either being a 'guk' that had no formal contact with the commanderies or a new/re-formed political formation. These records again therefore underscore the flexibility and probable independence that Mahan polities had from one another or any local authority in their relations with the Chinese courts.

Finally, along with the seemingly regular trade and diplomacy, instances of conflict are noted. The most detailed account is that of the attack by Sinbungoguk (臣濆沽國) on a military camp belonging to Daifang (although no date is specified). This event was apparently in response to a mistranslation regarding whose sphere of influence the 'guk' fell under. While there is little detail, the fact that contacts between the commanderies were with specific 'guk,'

and that those polities were able to act independently in military matters is evident.

(3-iii-i-iv) Interactions among Mahan groups

Direct references to the form of relations between the 'guk' of Mahan, or specific events involving them, are hard to find in the Chinese texts. This is unsurprising; the records are focused upon events relating to China and there was therefore no impulse to record events that did not directly affect the Chinese and their relationships with frontier peoples. Any information can therefore only be inferred, and may or may not be representative.

The clearest evidence of internal Mahan organization is found in the *Jin Shu*. As discussed, individual 'guk' associated in a fluid way and acted independently in their relations with external powers. Evidence indicates that, at times, by at least the 3rd century the Chinese saw a clear alliance or confederacy leader in Sinmi-guk. Whether other associations were cartels of equals or alliances with paramount leaders cannot be inferred, but no one of them is identified as being superior. Whether Sinmi's leadership position affected other types of activity cannot be seen, but in the context of interchange with China it is identified as a leader. Again, that Sinmi had not previously been identified or contacted would give some support to a conclusion that there was fluidity in over time, with groups and alliances forming and waning.

The independence of each polity in terms of military actions and the case of the Jin King also inform us about inter-polity relations. The latter case finds some parallel in the structure of the early Silla kingdom, where the paramount king both shared power with a secondary king and led a council made up of various other kings (see McBride, 2011; also Nelson, 1993b: 302). Silla is both later in time and relates to a different Han (韓) group, Jinhan, however its structure adds weight to the argument that there was some tradition of group or council-based

organization in the southern part of the peninsula.[25]

(3-iii-i-v) Interpersonal relations and practice

Few and vague details describe interpersonal relations in the *Dongyi Zhuan*. Equally, what appears as useful information at first glance must be rethought once we take into account the way the Chinese recorded other peoples. For example, one entry states that Mahan people "do not have the customs of bowing or kneeling (無跪拜之禮)[26]," which could indicate that these people had no tradition of showing deference. However, when we consider that the Chinese observers were measuring Mahan people by the yardstick of their Confucian culture, this record probably indicates that Mahan people simply did not follow the same rules of propriety. Forms of deference that did not fit the Chinese model may not have been noticed. Deference customs are specifically described for Koguryo and Wa, however they are very obvious (e.g. a way of bowing; backing off the road from superiors) and inferring a specific lack of deference custom for Mahan would be unjustified.

Another example pertains to practices in the domestic space. The text states that in the house they "make no distinction between old and young, men and women (無長幼男女之別)[27]," indicating possible egalitarianism in domestic relations. More likely however this reference simply means that the relations between young and old or male and female are not the way

[25] Further, for discussion of possible male-female co-rule in Silla see Nelson (1991, 1993b, 2017: 86-98).

[26] *Sanguozhi*, *Weizhi* Vol. 30, *Han zhuan*

[27] *Sanguozhi*, *Weizhi* Vol. 30, *Han zhuan*

they 'should' be. A similar entry is made in the Wa account about men and women associating at assemblies, but the mode of interactions is not clear. In all likelihood this entry simply means that all members of a family live in the same room.

A further entry suggests Mahan leaders had the ability to secure labour from the population. It tells of a practice where young men pierce their backs with ropes "when in their country it comes to be that official houses order the construction of settlement walls (其國中有所為及官家使築城郭)[28]." This section is anachronistic with an earlier entry that says Mahan settlements have no city walls (although walls do appear in the late 3rd century – see Ch. 5). The accounts of Jinhan and Byeonjin both state that these groups have walled settlements, so this may be another case of south-eastern practices being included in the Mahan accounts. This reference reinforces the fact that there were some prominent individuals or family lines, but how far they could order others to do things is not immediately obvious (see below).

The final relevant entry concerns proper rites and manners, making a distinction between the northern part of Mahan and the southern. It states that "their various polities in the northern region, near the commanderies, have rather clear rites and customs; those located far away assemble like convicts and slaves (其北方近郡諸國差曉禮俗 其遠處直如囚徒奴婢相聚)[29]." Those in the north therefore were seen as having more "proper" relations, presumably between living and dead, upper and lower, male and female. Those in the south however do not show the 'proper' hierarchy and relations expected by

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[28] *Sanguozhi*, *Weizhi* Vol. 30, *Han zhuan*

[29] *Sanguozhi*, *Weizhi* Vol. 30, *Han zhuan*

Chinese eyes. While it is unclear whether this is a long-term difference or the result of closer contact with Chinese civilization and ideas via the commanderies, the latter seems plausible. The absence of a strict Confucian-style hierarchy cannot be seen as evidence for the absence of formal hierarchy; however in light of the discussions above, it may be argued that clear and strong vertical relations were not obvious in much of Mahan society.

3-iii-ii – Discussion

An explicit aim of this study is to test whether prevailing chiefdom models of Mahan stand up to a critical view; as argued here, such models are found wanting. Both Sahlins (1963) and Earle (1987; 1991) have provided characterisations of the types of chiefdoms the Mahan 'guk' are purported to have been. Heritability of social position, control of labour by chiefs, a non-producing elite group, attached specialists, clear symbols of power, land ownership by chiefs, and centralized decision-making and coordination are key facets of such chiefdoms. The Chinese texts give little support for such a model in Mahan. That is not to say there were no leaders, titles or vertical decision making, yet a model assuming that this was the primary organizational form does not appear substantiable based upon the evidence from the texts. It is true that certain elements of the chieftainship model cannot be assessed via the texts (e.g. land ownership); however the evidence of autonomy, flexibility and decentralization indicates that a different form of social organization prevailed.

The highlighted features fit well with the attributes of heterarchy discussed in Chapter 2. Multiple named positions with particular roles or fields of action existed, yet titles appear either self-proclaimed or via wider consent. The strength or permanence of any vertical authority is thus questionable, with a strong implication that recognition is somewhat voluntary (i.e. natural authority). Self-proclamation of social position (e.g. *sinji*) would

necessitate some wider evaluation and recognition, and suitable individuals were named by being widely recognized within the settlement (e.g. Lord of Heaven). A group noted as common people were present, but in certain key aspects of life they held significant autonomy to do as they liked, forging or borrowing purported status symbols in the process. References to a lack of control due to the "mixed" or "mingled" nature of leader's settlements also implies a decentered mode of power, and further emphasizes the autonomy of the populace. That individual polities were free to go to war and formed groups of various combinations to interact with the Jin Dynasty court indicates that autonomy and flexible or situational leadership is salient among, as well as within, the various guk of Mahan.

Clearly, institutionally hierarchical elements or concepts were present in Mahan society; the positions of *shinji, eupcha*, and Lord of Heaven were meaningful, and thus imply some status or authority. While the positions were highly flexible, it cannot be confirmed whether access to them was restricted to a certain sector of the population. Silla did have strict sumptuary codes specifying social rank via birth (see Nelson, 1991:103-4; 1993b: 309-10), which may be relevant to all Han (韓) groups; however, as Leach's (1965) account of the Kachin notes, ideal descriptions can contrast widely with situations as lived out on the ground. Groups in the northern Mahan area (ultimately where Baekje emerged) are also noted as having taken on identifiable aspects of propriety, at least in some areas of action, implying some potential solidification of formal ranked relationships. Yet such a situation cannot be assumed for the entirety of the Late Iron Age, nor for all Mahan contexts. Thus, the bases of any formal power appear weak, and when the text is taken as a whole it is difficult to see the sanctions any vertical authority had at its disposal to encourage compliance.

Not all facets of heterarchical organization can be identified due to the nature of the text. For example, the contents of specific evaluative frameworks cannot be accessed (but see Ch. 7-i)

even though we know there are at least two areas of authority in the *sinji*/*eupcha* and the Lord of Heaven (with a possible third based on lineage). Therefore, that heterarchical relations are the primary principle structuring Mahan socio-political organization is not provable via the texts. Vagueness means that much key information is missing, probably because the Chinese did not understand or care to delve into the workings of Mahan society. With Chinese chroniclers seeing or seeking social organization through their own lens of how a polity 'should' be, leaders in Mahan were likely seen and portrayed in the prevailing Confucian and colonial/Imperial moulds. This situation has led to certain anachronisms in the *Han zhuan*, where the centre has little authority, leaders pronounce themselves, obvious vertical relations are hard to identify, and commoners exercise wide autonomy.

Models assuming formal chiefly authority may have been particularly attractive in Korea due to their own Confucian heritage, but perhaps more due to the fact that the country spent most of the 20th century under militarized authoritarian regimes. Strict hierarchy may therefore have become an assumed given, or common-sense, position. Indeed, aspects of military culture still remain in a great many areas of Korean life and culture (Eckert, 2016: 1-3, 321-2). Attaching prevailing evolutionary sequences to Korea may have also been influenced by the desire to portray Korean history as 'normal' following Japanese colonial control of the historical narrative (Byington, per. comm.). Yet, such positions deny a space for different forms of complexity and different forms of authority. As this chapter demonstrates, heterarchical principles appear relevant and salient in the available data regarding Mahan. An acknowledgement of such elements can only give a richer and more complete representation of Mahan society. Such an approach, which aims to identify types of social relations in certain fields of practice, is highly likely to produce more faithful models of past social formations.

The salience of heterarchical organizational principles not only justifies a re-examination of the archaeological evidence relating to Mahan (see Chapter 4), but must also prompt reflection regarding the formation processes of the Baekje state (see Chapters 5, 6 and 7). Due to their various issues and biases, the records alone cannot be used to securely understand Mahan social organization, and little of the information can be taken for granted as being generally applicable through time and space. However, as will be shown, patterns within the archaeological data, when compared with the model and expectations for heterarchy set out in Chapter 2, do broadly support the conclusions made here (discussion in Ch. 7).

Chapter 4

Evaluating Heterarchy within Mahan (c. 100 BC – AD 250) through Multi-Scalar Settlement Analysis

Analysis of texts in the previous chapter indicates that it is reasonable to hypothesize that Mahan had a clear elements of heterarchical organization. Testing the archaeological data against the expectations laid out in Chapter 2 may therefore not only provide support for this general position, but also enable the identification of the kinds of social practices where heterarchical principles predominate (e.g. crafting, leadership in conflict, leadership in ritual and ceremony, leadership in extra-polity relations). Points where the textual accounts and archaeological patterns intersect will make these distinct types of evidence mutually supporting, strengthening any conclusions. This chapter therefore examines settlement evidence from the northern area of Mahan (the Han River Basin and Hwaseong region) using a multi-scalar approach, piecing together patterns on both regional and site-by-site levels.

Although the model set out in Chapter 2 was relatively general in scope, this analysis is focused on settlement and production site evidence. In part this strategy is due to constraints on time; however, dominant models related to Korean Late Iron Age (LIA) societies, their interaction networks, and the emergence of the Baekje and Silla Kingdoms have been rooted in funerary evidence (e.g. Lee, 2000; Park, 2001a, 2001b, 2007; Kwon, 2008; Yi, 2009b; Barnes, 2015), making an alternative perspective valuable. Funerary sites have often been argued as stand-ins for settlements, making assumptions that the organization of mortuary spaces directly maps onto presumed nearby settlements (e.g. Lee, 2000; Park, 2001a, 2007, 2010).

Arguably therefore, other than considerations of fortresses like Pungnab and Mongcheon (see

Barnes, 2001; Kwon, 2002, 2008; Park, 2010), settlement evidence has been relatively poorly integrated into understandings of Mahan society and the emergence of more centralized forms of power. In terms of settlement patterns, chiefdom models based on particular readings of the textual and funerary data are assumed more than demonstrated. Yet there has been a veritable explosion of available material since the late 1990s (see Shoda, 2008), along with some recent developments focused on settlement archaeology (e.g. Song, 2010; Kim et al 2016; Park et al, 2017).

The study here, rooted in the living space, therefore provides a counterbalance to an overreliance on funerary material, potentially reflecting daily life and routines more closely. Burial practices often have a more idealized, ritualized, or abstract nature (Parker Pearson, 1999: 32-34; Stutz and Tarlow, 2013: 5-6). Patterns in activities surrounding death are not simple reflections of those in life; they offer ideals, structured disjunction from day-to-day existence (Hodder, 1980).

4-i – A Multi-scalar Approach to Heterarchy

Combining the framework of socio-political heterarchy with a spatially multi-scalar approach to the archaeological material is potentially very powerful. Macro-scale patterns are utterly rooted in specific activities on the micro-scale, i.e. in the various doings of everyday life and social contexts (Pred, 1990: 10-15; Tringham, 1991, 1994; Pauketat, 2001: 86; Robin, 2013: 2-7). The vast majority of archaeological material we may study relates to relatively small and specific events (Mills, et al, 2015: 4; Tringham, 2018: 59-61), or at least agglomerations of such. As Pred (1984, 1990) discusses, any individual, group, or institutional goal-oriented project is constituted by its intersection with individual 'paths,' the continuous activities and movements of a person in time-space. For these reasons, understandings and accounts of

regional (meso- or macro-scale) patterns and changes must refer back to activities on the micro-scale, focus on grand macro-scale events or changes risks detaching such events and changes from the everyday processes and varied individual paths that created them (see Robin, 2013: 23).

Various recent approaches to multi-scalar analysis in spatial units have either employed network analysis (e.g. Knappett, 2011; Mills et al 2015) or employ Geographical Information Systems (GIS) software to mathematically model factors influencing site locations or create predictive models of site locations (e.g. Bevan and Conolly, 2006; Ridges, 2006; Andrews et al 2008).

In contrast, I will take what could be termed a more interpretive approach, inspired by Tringham (1994; also Joyce and Hendon, 2000) who argues for dialectically articulating the macro-scale with the micro-scale (for another more interpretive multi-scalar approach see Heckenberger, 2013). Like other scholars noted above, Tringham (1994) stresses the fundamental interaction of the everyday micro-scale with the supra-domestic patterns on regional and generational levels. She reveals both how the Late Neolithic-Early Eneolithic hamlet of Opovo in modern day Serbia reflects population shifts away from large central tell settlements at broader regional and temporal scales, while also documenting the specific life-history of the main house within the settlement (pp. 188-191). That a tiny hamlet located in a marshland holds such possibilities for analysis and understanding means that 'marginal' sites cannot legitimately be said to exist; *any* activities on the micro-scale may be significant regarding patterns in the wider region and vice-versa (Tringham, 1991; 1994). All all material variation therefore has some meaning and significance (also Brumfiel, 2000).

The archeological expectations for heterarchy I set out previously lend themselves very well

to a multi-scalar research strategy (see Ch. 2, pp. 30-1)). The socio-political heterarchy model allows the theorization of relations, and thus expected material patterns, at multiple scales. Different scales offer different types of information and give insights into different types of relationships and interactions (Knappett, 2011). Additionally, examining evidence and comparing patterns at multiple scales allows for more robust inferences to be made (Andrews et al, 2008: 466-7).

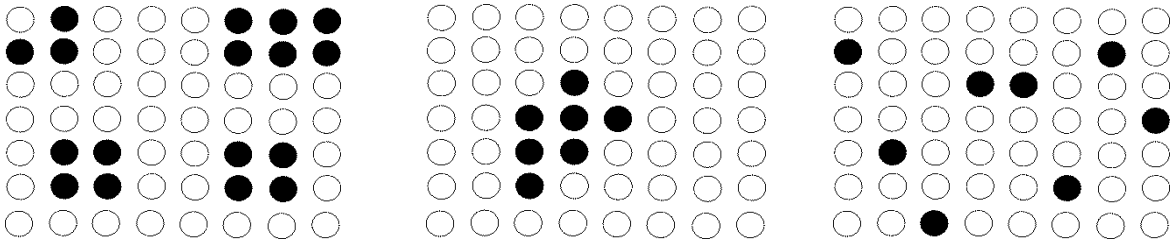
Unlike Tringham's (1994) approach I will not be reasoning back and forth between a single site and the wider region. Instead, *all* known sites within the study area have been analyzed and characterized. More general patterns and site types are thus described and examined, although interesting exceptions will be highlighted. The rest of this section will set out and justify the types of evidence used to evaluate heterarchy in the lower Han River Basin and Hwaseong region (Fig. 1-1).

4-i-i: Categories of Evidence

Inter-community relations governed primarily by heterarchical principles will lead to multi-centric or balanced patterns in various lines of evidence. Individuals or groups, interacting with other autonomous actors, would rarely be able to monopolize activities, competence, and thus authority in multiple types of social project or institution (or even just one), at least over the longer term. A multi-centric pattern is represented in Figure 4-i, where the distributions of some hypothetical symbols of authority cluster into four distinct areas, none of which could reasonably be labelled as paramount.

Here, each circle represents some unit of space, and filled dots denote the presence of authority signifiers; dots could therefore represent single features, households, districts or whole sites. Other potential distributions are also visualized. A monocentric pattern (Fig. 4-1ii)

has a single cluster, while a scattered pattern showing no apparent clustering (Fig. 4-1iii). A distinct type of multicentric distribution is presented in Figure 4-2, where different clusters specialize in different production activities; a balanced pattern that would reflect and reproduce relationships of interdependence.



(i) (ii) (iii)

Figure 4-1: Schematic representations of the possible spatial distributions of hypothetical authority symbols (i) multicentric, (ii) monocentric, and (iii) scattered.

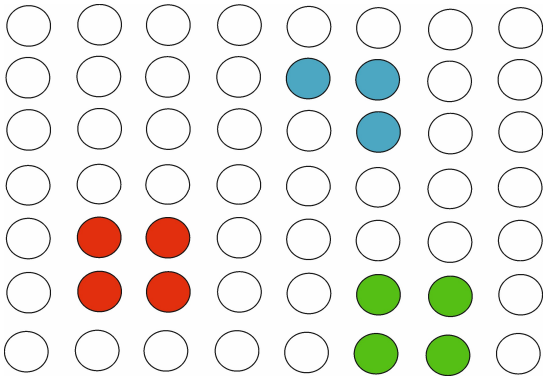


Figure 4-2: Hypothetical balanced distribution of different production activities (red: pottery manufacture, blue: metalworking, green: cloth weaving)

Here I map multiple categories of archaeological evidence on both the site and regional levels in order to identify types of distribution and thus infer something about the mode of social organization. For example, a multi-centric or scattered pattern of storage features reflects a

significantly different mode of organization than a case where storage features are sequestered in one area. In this manner, not only can general tendencies be discovered, but also patterns of organization and interaction within and among particular types of activity may be illuminated (i.e. is there contradiction and tension or synergy?).

(4-i-i-i) Compounds and Architectural Projects

One of the easier features of a settlement site to identify, at least in the context of a Korean archaeology that prefers the full open excavation of any target area[1], is the presence of distinctive domestic compounds. Heterarchically organized communities likely had either no clear compounds or multiple similar compounds, varying in degree rather than kind. Where some paramount authority exists, architecture emphasizing social distance and distinction would be expected. In both Sahlins' (1963) and Earle's (1991) accounts chiefs accumulate surpluses via recognized land rights and invest significant portions of that surplus into maintaining some sort of retinue (also Earle and Spriggs, 2015). Investments would also include distinctive architecture that set chiefs apart from the majority (either domestic or communal), demarcations of high status spaces (with walls, ditches, or other features), and storage facilities. Such elements are likely to be archaeologically visible, with their presence and distribution on any site being an informative starting point in the analysis of social organization.

Even in cases where distinct compounds or easily identifiable distinctions may be lacking the presence of relatively large-scale public works has been suggested as a feature of group-

[1] Since the 1990s most excavations have been in advance of development (see Bale, 2008; Shoda, 2008; Barnes, 2015: 33), the preference for full open excavation of sites, recording everything possible in advance of destruction/construction, is thus understandable.

oriented or corporate strategies for chiefdoms (e.g. Renfrew, 1974; Blanton et al, 1996). Archaeological expectations in these schemes do have some overlapping elements with those of heterarchy, however the *mode* of social organization is key (also see Kristiansen, 1991). Understanding of such public works therefore needs to be viewed in relation to other lines of evidence at both local and regional levels in order to grasp how such works came to be. Grand projects requiring the mass mobilization of labour are less of a concern in the period under investigation in this chapter due to the relatively small scale of even the largest settlements (see below); but they are highly relevant in the next chapter, which addresses the emergence of the Baekje state.

(4-i-i-ii) Status-Reputational Symbols and Worlds of Authority

Each 'world' of authority (see Ch. 2) is likely to be bound together with material culture that provides some shorthand for competence and authority evaluation; I label such items status-reputational symbols, or status signifiers. Such material culture will have had a relatively high degree of time/effort investment to produce or procure, particularly in fields where highly specialized skills or esoteric knowledge was central to evaluative frameworks. While much material culture that served these roles will have been made of perishable material, other items are likely to have been created using media with more permanence. Mapping where such goods are concentrated allows insight into whether signifiers of authority were monopolized by certain segments of a community or whether these signifiers were more widely accessible.

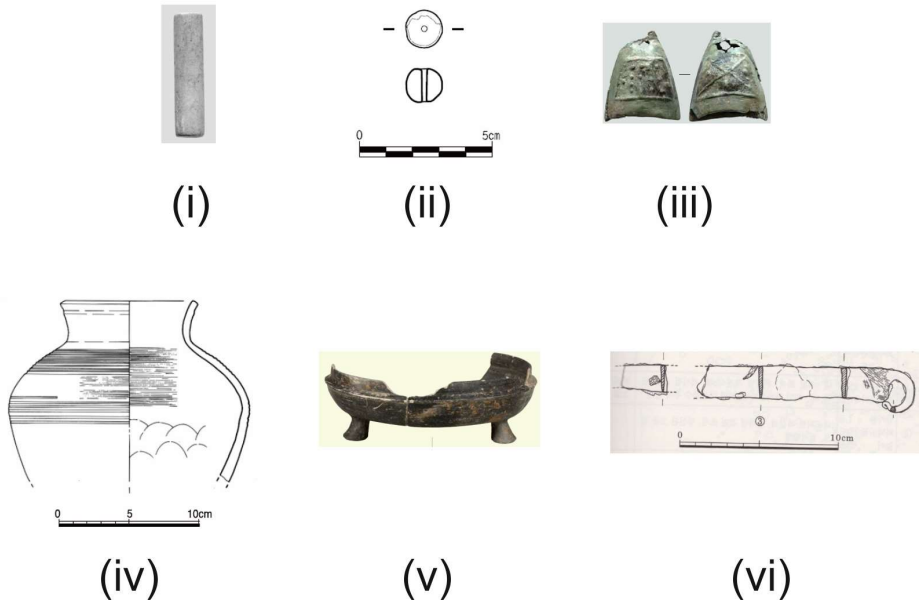


Figure 4-3: Examples of likely status-reputational symbols during the Late Iron Age and Three Kingdoms Period in the Korean central region (not all to scale); (i) tubular 'jade' bead (from Gyeonggi Cultural Foundation, 2009a: photo 119-3), (ii) agate bead (from Korea Institute of Heritage, 2008: 179, Fig. 49), (iii) bronze bells (from Gyeonggi Cultural Foundation, 2011: 4, colour photo 4-15), (iv) Lelang-style pottery (from Gyeonggi Cultural Foundation, 2009a: 202, Fig. 109-7), (v) Black Burnished tripod dish (modified from National Research Institute of Cultural Heritage, 2012: 570, photo 92), (vi) ring-pommel short sword (from Son et al, 2008: 61, Fig. 19-3).

Common examples of status-reputational symbols in the context of Mahan and Baekje settlements are various types and shapes of bead (including jade[2], agate and other types of gemstone, glass, and shell), bronze bells and other ritual items, Chinese-style bronze mirrors,

[2] I use the designation "jade" in the broader umbrella sense set out by Barnes (2018: 1-2), whereby rocks such as amazonite, which humans have often treated as jade, are included.

imported ceramics (from China, Japan, other regions of the Korean peninsula), various forms of black burnished pottery (also see Ch. 6), and ring-pommel swords (see Fig. 4-3). Such items fit the bill in terms of being both high investment to make or obtain *and* having aesthetic features that indicate some role for their display. Additionally, various forms of greyware serving vessel, associated with the class of "Baekje Pottery" (also includes black burnished pottery) emerging after the mid-3rd century C.E. (see Park, 1992, 2001a; Choi 2008), may be considered status signifiers. However, because these items are related to food serving and feasting their distributions are considered separately below.

Different types of item allow insight into different worlds of authority and the people and social networks producing them. Different types of artefact appearing together regularly are likely to be part of a 'set' attached to a particular world of authority. Status signifiers may also be found in common association with other activities such as crafting or food storage. Insight is therefore possible into the types of social roles or personae taken on by people working within certain worlds of authority. A means to identify particular worlds more concretely is also on offer (see Ch. 7).

On the regional scale, in order to examine whether individuals or communities from particular settlements were drawing in more status signifiers than others, I will use the ubiquity metric set out by Costin and Earle (1989: 694-5). Ubiquity scores present the percentage of contexts on a site where particular artefacts are found, gauging frequency of occurrence rather than raw abundances. Considering the very low abundances of such items on the settlement sites examined in this study this metric is judged to be the most appropriate and informative. Count data would skew towards larger sites even when smaller sites may have proportionally greater concentrations of status signifiers, while weight data is not recorded in Korean reports, and would not be valid due to the multiple types of material

being investigated. Calculating numbers per hectare or related metrics as artefacts outside of obvious features are not consistently recorded. Ubiquity puts sites on a level playing field. The ubiquity metric is, essentially, qualitative, and not amenable to statistical tests; the metric does however involve the recording of presence-absence data, which can be analysed statistically for significant associations among evidence types (see Chapter 7-i).

Domestic structures are the focus here, so as to avoid inflating the number of contexts with the multitudes of small pits on some sites and thus maintaining site-to-site parity. Also, rather than mapping each type of status-reputational symbol individually all types are aggregated because, again, the aim at this level of analysis is to examine the degree to which people were procuring or manufacturing such items. The work of identifying differences is included in the site level analysis.

(4-i-i-iii) Meeting and Eating

Spaces and activities that encourage face-to-face contact are expected to be a common feature of any heterarchy because they create situations where competence/authority may be evaluated, negotiated, and reinforced. Archaeologically, such spaces and the activities within them may be visible through the existence of public meeting areas (plazas, fora, meeting lodges/halls etc.) and other material, especially those related to feasting or public ritual. Feasting is possibly easier to identify, often requiring various facilities and material accompaniments such as the aforementioned architectural spaces, the presence of luxury foods, specialized food preparation areas, and specialized serving vessels (see Hayden, 1996 2014).

However, such interactions may in fact be on a predominantly household-to-household basis (see Ch. 2). Grander or more obvious facilities would therefore have been absent, and the

only way to assess the prevalence of such activity is through the distribution of serving vessels. To give a preview of what follows, this is the precise situation during Central Korea's LIA, forcing a reliance on concentrations of serving vessels as a proxy for face-to-face interaction, despite the fact that the serving vessels themselves are quite plain and generic[3] (an issue somewhat removed in the later period due to the emergence of Baekje Pottery). Unfortunately, high concentrations of such vessels may therefore simply reflect households or clusters with more members or that were longer lived. While such issues cannot be erased, they may be mitigated by paying attention to size of dwellings, the relative size of the household clusters, and stratigraphic relationships indicating the number of iterations a household or cluster has gone through.

Serving vessels during the Early Baekje Period (i.e. after approx. AD 250) are generally well described (see Jung, 2015; Kim et al, 2016; Fig. 4-4), and some forms are related to or directly carry over from the LIA. However less attention has been paid to identifying probable serving vessels in the earlier period, particularly with regards to red/brown earthenware forms. Since residue analysis and ethnoarchaeological studies in Korea are very limited, and the fact that scorch mark patterns are rarely described or depicted in excavation reports, serving function must be inferred from vessel form, as is also the case for the Baekje Period (Kim et al, 2016: 133).

Paying attention to the types of action an artefact or piece of material may "afford" (see Ingold, 2007: 5-6; Knappett, 2011: 66-7) is one possible way to work through this problem. Figure 4-5i gives some examples of earthenware vessel forms that afford serving and eating. Such forms contrast strongly with those of Figure 4-5ii, which are of similar sizes and

[3] Serving vessels could also have been made with perishable materials.

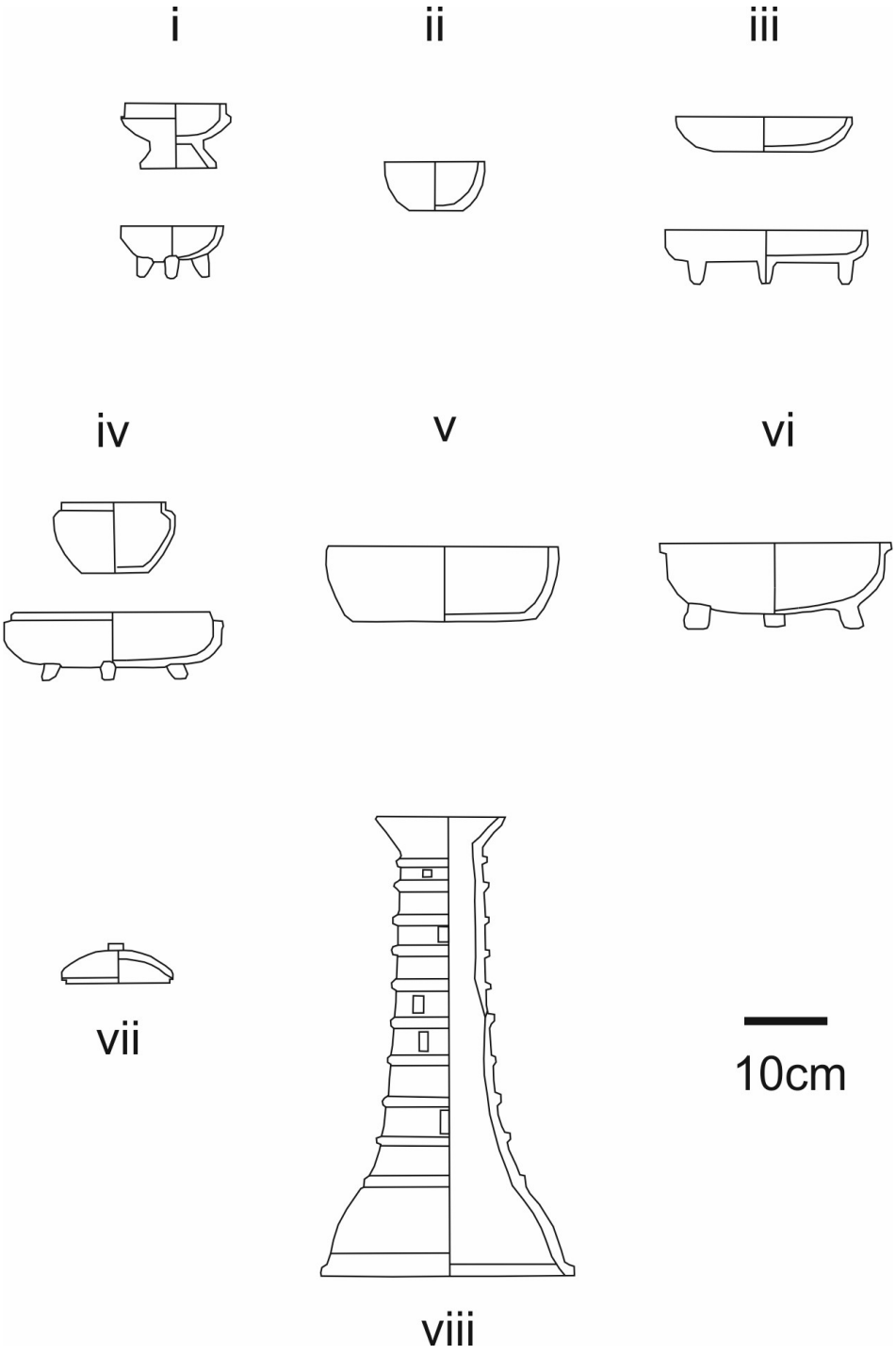


Figure 4-4: Types of Baekje serving pottery; (i) footed and tripod bowls, (ii) bowls, (iii) plates and tripod plates, (iv) lidded and tripod lidded bowls, (v) dish (vi) tripod dish (vii) lid (viii) pot stand (redrawn after Kim et al, 2016).

manufacturing methods but impossible or highly inconvenient to eat from.

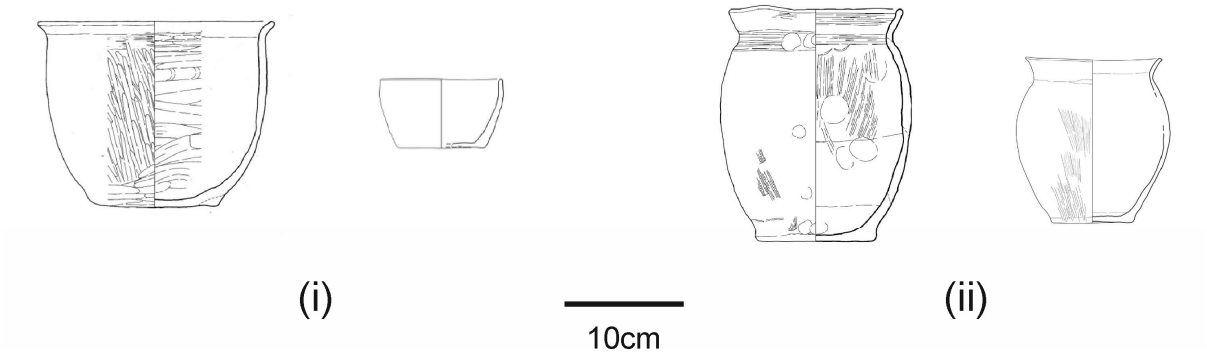


Figure 4-5: Examples of Hard Plain Pottery vessels that (i) afford eating (*left* from Gyeonggi Cultural Foundation, 2009a: 202, Fig. 109-1; *right* from Central Institute of Cultural Heritage, 2010: 263, Fig. 126-5) (ii) do not afford eating (*left* from Korea Institute of Heritage, 2010: 92, Fig. 26-3; *right* from Central Institute of Cultural Heritage, 2010: 243, Fig. 115-5).

Following the above point, I judge that one form of stoneware commonly labeled as being only for cooking, the deep bowl (or *simbal* shape) (see Jung, 2007, 2015; Han, 2010; Kim et al, 2016), often has forms that also afford eating (Fig. 4-6). There is no reason to discount a dual-use, where a vessel is transferred from the cooking fire or range to the eating area, where the contents are then consumed. This practice is common in modern Korea in both households and restaurants, and while I make no attempt to argue for a direct historical lineage, any such deep bowls whose forms afford eating have been treated as serving vessels in the following analysis.

Recent Korean excavation reports tend to describe and depict all vessels and sherds that have

diagnostic shapes and/or decoration[4]. Weights are therefore not reported, only counts according to those specific criteria. Although this situation in not ideal, it is possible to count the minimum number of *reported* individuals for each feature on a site. Along with whole (or near whole) vessels, I also count diagnostic individual rim, body, or base sherds as one vessel. In cases where, for example, separate rim and body sherds from the same vessel form and ware are reported, and it cannot be determined that the two sherds were from different vessels, they have been counted as the same vessel.

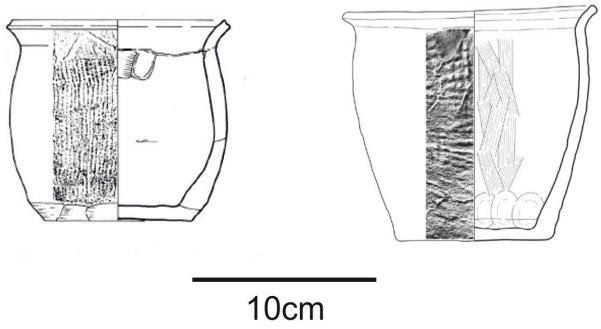


Figure 4-6: Examples of *simbal*-type vessels that afford eating (*left* from Gyeonggi Cultural Foundation, 2007a: 279, Fig. 140-1; *right* from Central Institute of Cultural Heritage, 2010: 72, Fig. 36-4).

Using this procedure it is possible to calculate the percentage of serving vessels any feature on a site contains, and thus map areas likely related to feasting and food consumption. The various types of imported or import-style pottery and stylized stoneware serving vessels have also been mapped using the same procedure. I define stylized vessel as the more elaborate or decorated forms that emerged in the Early Baekje period, in contrast to the simpler and

[4] Often, for house features, only what is found on the presumed house floor is reported (in the majority of reports, but not all). This problem is unavoidable but must be noted.

plainer vessels seen in the LIA (i.e. footed bowls, three legged dishes, bottles, stylized bowls, pot stands – see Fig. 4-4). Imported, or import-style, pottery are those vessels with styles characteristic of other regions of Korea or from the wider region; for example, from the Chinese mainland or the southeastern part of the Korean peninsula (Fig. 4-7; Fig. 4-3iv). Imports and import-styles were both nested inside the general serving vessel category and also analyzed separately as status signifiers.

In addition to vessels related to serving, likely meeting places exist on certain sites. Such spaces include semi-formalized open spaces or structures that may be seen as 'pavilions,' where relatively small groups of people could have sat together to consume food and tighten/create social bonds. As with feasting in houses, these structures would have been more intimate, facilitating social evaluation and the impact of any status-reputational signifiers. Pavilions could also have been settings for entertainment, but detecting such activities is not possible.

Pavilions are inferred to be larger square or rectangular platforms supported by a series of posts. Some such structures are extremely large, and quite obviously meeting halls of some sort (over 100m^2 in area - see Ch. 5). Others however are similar in layout and area with what are likely grain storage structures (see below). Plotting a histogram for the areas of all post/platform structures (two very large examples excluded) allows candidate pavilions to be separated from the storage structures. Three candidate pavilions with areas greater than two standard deviations from the mean may therefore be identified (Fig. 4-8). The on-site locations, visibility and associated contexts may therefore be mapped and assessed, allowing a better judgement of whether these were indeed pavilions or larger storage structures.

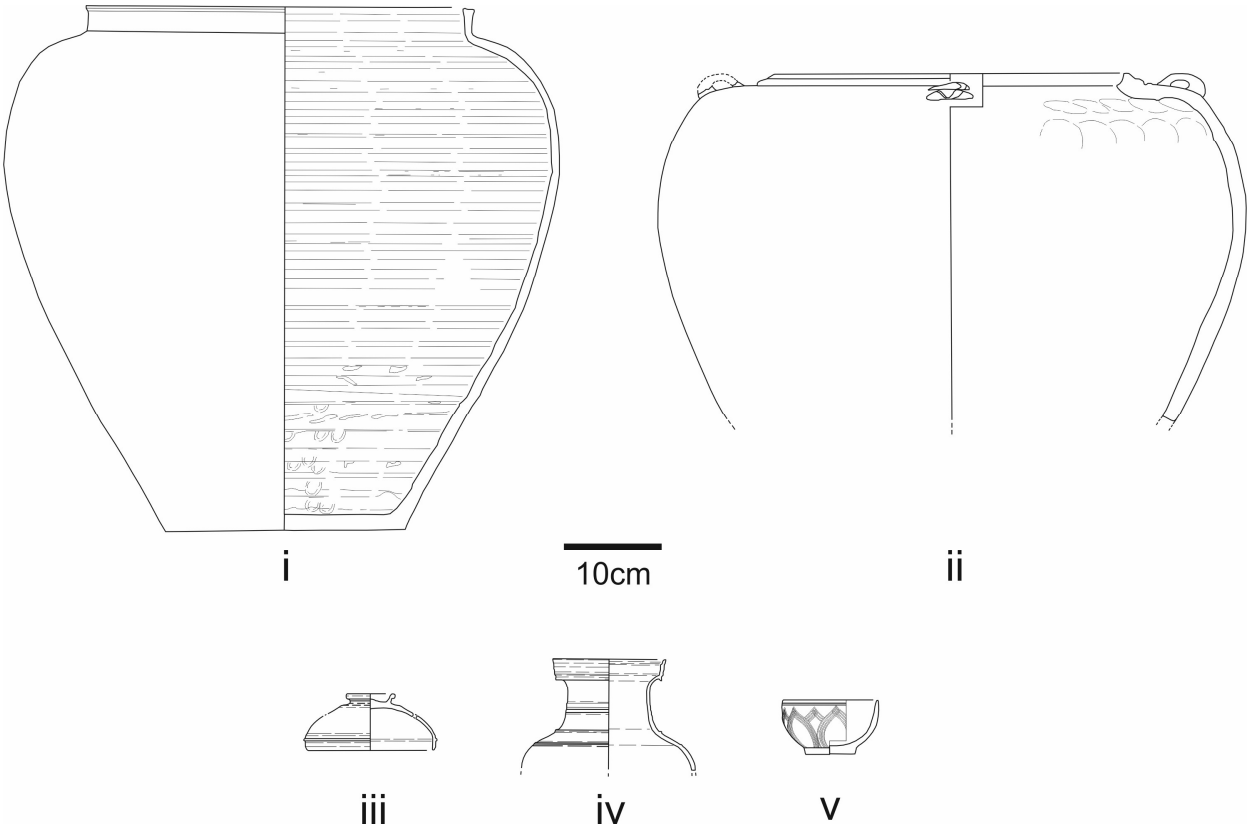
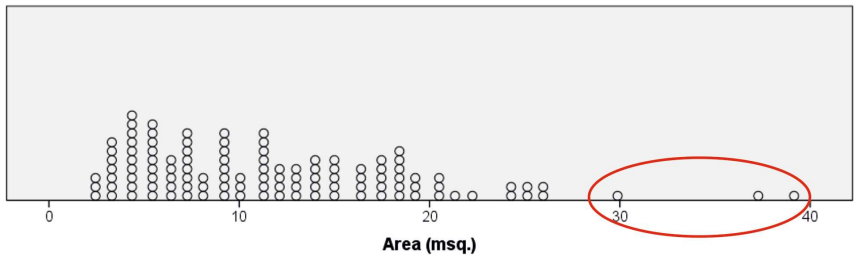
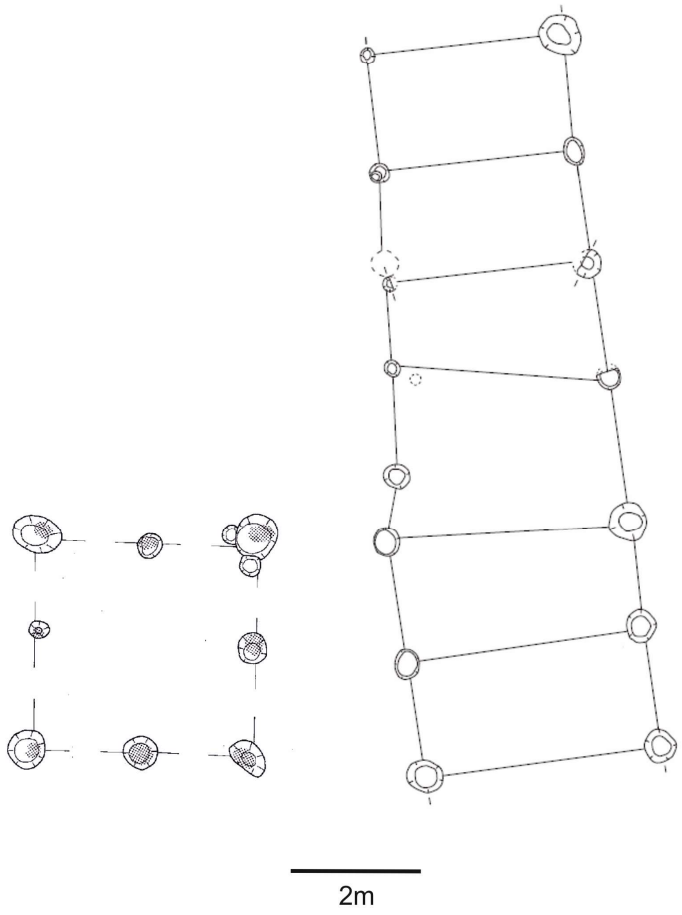


Figure 4-7: Examples of import (style) pottery found within the study area (i) Chinese stoneware jar (redrawn after Seoul Baekje Museum/Hanshin University Museum, 2011: 32, Fig. 22), (ii) Chinese stoneware jar (redrawn after NRICH, 2001: 279, Fig. 136), (iii) Silla style lid, a style from the southeastern region of Korea (redrawn after Gyeonggi Cultural Foundation, 2009b: 245, Fig. 125), (iv) Silla style lid, a style from the southeastern region of Korea (redrawn after Gyeonggi Cultural Foundation, 2009b: 254, Fig. 129), (v) decorated Chinese porcelain bowl (redrawn after NRICH, 2012b; 112, artefact figure 103)

Serving pottery is also used as a proxy for identifying any site's intensity of feasting activity when considering the wider regional scale. Two metrics are used to this end; first, the ratio between serving vessels (of any ware) and all other types of ceramic vessel (cooking, storing etc.). This ratio controls for site size or type, and highlights the intensity of feasting activity at



(i)



(ii)

Figure 4-8: (i) plot showing the areas of post buildings throughout the study area (mean area = 11.92m^2; s.d. = 7.32; n = 114) with candidate meeting places highlighted (two cases with areas of over 100m^2 excluded); (ii) an average sized structure (*left* – modified from Yoon and Lee, 1994: 202, Fig. 96-KB 219) and a candidate meeting place (*right* – modified from Gyeonggi Cultural Foundation, 2007b: 458, Fig. 328).

sites throughout the study area. The second metric is the proportion of import-style and stylized stoneware serving vessels on a site, being the ratio of such vessels versus all other types of stoneware vessel.

(4-i-i-iv) Storage

The distributions of storage features will give an indication of how far households may have been autonomous or whether particular sub-groups were able to monopolize labour and/or food distribution. Two main types of storage feature can be identified within the study area, flask-shaped or deep cylindrical pits and small post/stilt structures. Because procedures like systematic bulk sampling are very rare on Korean excavations, pit functions must be inferred from forms and finds. DeBoer (1988: 3) notes that the most common forms of storage pit identified in the ethnographic literature are "deep cylindrical or bell-shaped" with a small circular opening. Y-H. Cho (2010: see Table 3; pp. 207-208), characterizing the uses of different pit forms in southwestern Korea, identifies multiple variants of flask-shaped pits and labels them as storage pits (Fig. 4-9). Storage pits are likely to have had repeatedly scraped sides due to need to clean buildups of mold or fungi. Indeed, repeated cleaning may alter the profile of the pit and exaggerate the flask-shape (Schroedl, 1983 in DeBoer, 1988: 4), which aids identification, but may lead to pit collapse during taphonomic processes.

Storage pits will be identified based on the criteria just outlined. Due to the reliance on pit form as reported in excavation write-ups, my criteria are necessarily general and may result in false-positives or relevant contexts being missed. However, the use of such criteria does allow a more explicit and systematic approach.

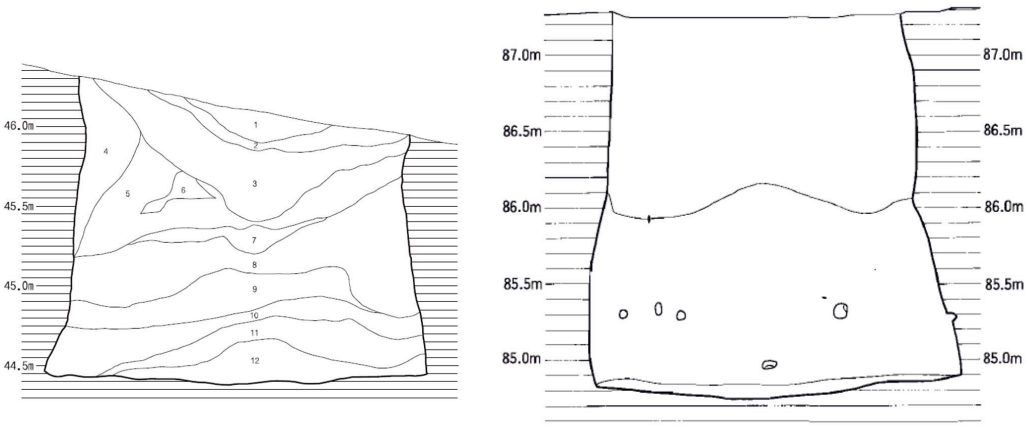


Figure 4-9: Example storage pit profiles (*left* from Gyeonggi Cultural Foundation, 2007b: 211, Fig. 127; *right* from Gyeonggi Cultural Foundation/Gijeon Cultural Research Centre, 2003: 103, Fig. 45).

Figure 4-10: Reconstruction of Japanese Yayoi Period granary or raised storage house.

(source: http://www2.oberlin.edu/images/Art251/Art251.html)

Post buildings come in various forms, but all are either square or rectangular, and over 80% of examples are either 2x2, 3x2, or 3x3 (see Fig. 4-8ii - left). Such structures appear analogous to others seen in settlements during the Yayoi Period in Japan, structures that are also interpreted as grain storage facilities (Mizoguchi, 2013: 57-8; also see M. Kim, 2015). Figure 4-10 offers a view of what such granaries may have looked like. Other analogous

structures are the “cribs” and “bins” of the Yucatan’s Puuc Maya, described by Smyth (1990: 52-54) as being elevated rectangular structures made of wooden posts, making a very similar profile to those in the Korean case. Although these facilities are for maize rather than any of the cultivars available in LIA Korea, such bins, lined by *guano* or leaves, would presumably be suitable for other products too.

Broader scale storage patterns are examined via the percentage of features on each site that are specifically given over to food storage activities. Through this metric it is possible to gauge whether people living at particular settlements were sequestering high volumes of foodstuffs. Such information is particularly useful in in relation to the intensity of agricultural activity on any site. Sites with much storage but a low intensity of agricultural activity likely indicate settlements that have some dependence on surrounding sites.

(4-i-i-v) Production Activities

The presence and distribution of production activities across a settlement will be indicative of how that production was organized. For example, were households autonomous, is there a balanced pattern (see Fig. 4-2), were artisans attached to certain high status household clusters (as in Costin, 1991: 25), were the same individuals working in multiple media, or were those with high social status doing certain types of crafting (see Inomata, 2001)? The main craft activities I map are (i) metalworking, indicated by the presence of crucibles (Fig. 4-11i), slag, blast pipes, or furnaces; (ii) cloth spinning, using spindle whorls (Fig. 4-11ii) as an index; and (iii) pottery manufacture, identified via the presence of wasters, anvils (4-11iii), or kilns. Evidence for glass bead production (Fig. 4-11iv) has also been found within the study area. Generally, any evidence for metalworking or pottery manufacture is mapped, based on an assumption that such items are unlikely to travel very far from loci of production

and that the majority of such items will cluster around such loci. In the case of spindle whorls however, because these items are so widespread, only those contexts with more than twice the site average number of whorls will be included.

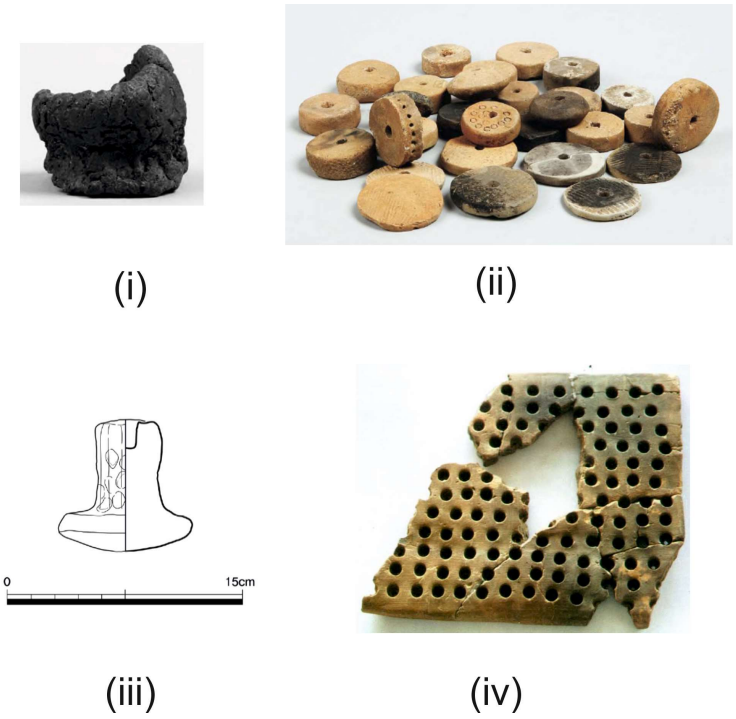


Figure 4-11: Artefactual examples of production activity; (i) crucible (from Gyeore Institute of Cultural Heritage, 2011: photo 40-5), (ii) spindle whorls (from Gyeore Institute of Cultural Heritage, 2011: colour photo 18-5), (iii) anvil for pottery making (from Central Institute of Cultural Heritage, 2010: 197, Fig. 93-8), (iv) glass bead mould (from Yoon and Lee, 1994: plate 5).

On the regional scale the locations of metalworking and pottery making are mapped, and ubiquity scores relating to farming activity (farm tools) and spinning (spindle whorls) are calculated in order to gauge intensity of said activities on any site. The relative abundance of the latter two lines of evidence allows the calculation of ubiquity scores (focused on

household contexts, as above), while evidence related to metalworking and pottery making tends to be more ephemeral. Other than sites where kilns and furnaces have been excavated most metalworking or pottery-making evidence comes from fragments of waste, sherds of blast pipe, or isolated tools found in household contexts, pits and ditches. Distinctions are therefore made between sites with tangible built facilities and those with only more ephemeral debris. Unfortunately, in the latter case, it remains difficult to judge the intensity of production in these cases.

(4-i-i-vi) Controlling for Site Size Variation

Patterns identified through the various lines of evidence outlined above are patterns *relative* to site level. Two sites may therefore be an order of magnitude different in terms of size or number of households and yet still have identical or similar organizational patterns. An example of such a pattern may be found in Postclassic Jalisco, Mexico, where larger centres oriented around central plazas are made up of multiple clusters which each have their own central plazas (Heredia Espinoza 2016).

Data on the regional scale are presented via site aggregate metrics. Sites are categorized into types (see Fig. 4-12), however these types make no assumptions about site status, organizational principles, or the specific activities. 'Villages' are settlements with evidence of multiple generations of architectural feature overlapping one another (and thus tend to be relatively large) (see Figures 4-14i, 4-16). 'Hamlets' show no such generational rebuilding. 'Fortresses' are walled sites (usually showing generational turnover and appearing the later periods – see Chapter 5). 'Production sites' have evidence of production only, with no architectural features (e.g. kilns, furnaces, field systems).

4-ii – Evidence from the Han River Basin and Hwaseong region

Figure 4-12 maps LIA sites in the Han River Basin and Hwaseong Region (see Table 4-1 for site names). Before presenting the data, the issue of site selection, and therefore chronology, must be discussed. Chronology building in Korea has typically relied on typological seriations of ceramic types (e.g. S-b. Park, 1992, 2001a, 2005; 2009; S. Oh, 1995; Junho Lee, 2009), house forms (Song, 1999; 2013a), or types of internal features within domestic architecture (Hong et al, 2008). Radiocarbon dates are not widely trusted due to the 'old wood problem' (after Schiffer, 1986) and margins of error being considered as too wide to be useful (also see Junho Lee, 2009; J. Kim et al, 2019). However, recent systematic work with large radiocarbon date databases indicate that the old wood problem is not a significant issue in the temperate environment of Korea, at least during the early 1st millennium CE (J. Kim et al, 2019; for a more general discussion see Cook and Comstock, 2014). Other work with radiocarbon dating has undermined traditional chronologies by revealing no conclusive chronological differences among the ceramic wares and vessel types commonly used as markers to denote the LIA's earlier and later phases (J. Kim, 2014; Kim and Kim, 2016; J. Kim, 2017).

Considering such results, I judge that using carefully selected radiocarbon dates to chronologically order sites in the study region is preferable to relying on more traditional seriations. Focusing on samples of short lived species (e.g. rice, beans) and architectural wood as cases with a strong correlation to activity at a site (Cook and Comstock, 2014; J. Kim et al, 2019), sites are ordered based on relevant samples' 2σ ranges, which thus provides a 95% certainty that the sample age falls somewhere within that range. A handful of sites do not have any dates, meaning assemblage composition must be used as a proxy. On maps such sites are represented by hollow symbols (e.g. see Fig. 4-12), as are sites that have radiocarbon

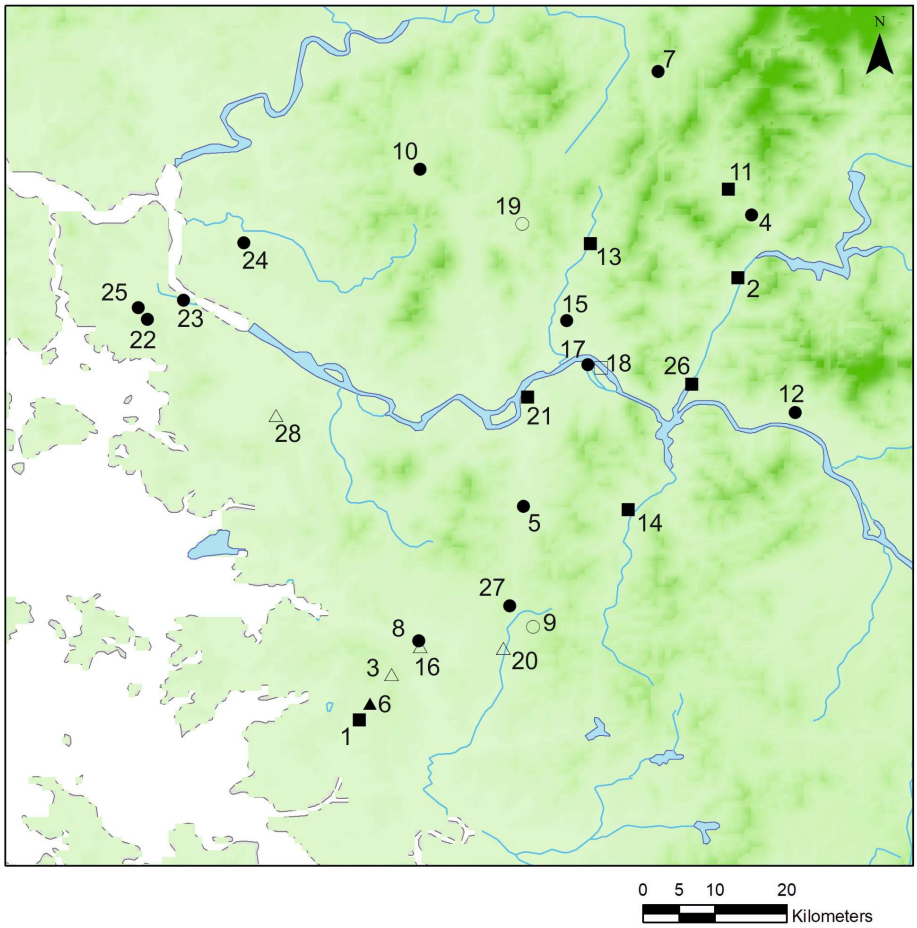


Figure 4-12: Late Iron Age sites in the Han River basin and Hwaseong region. Including hamlets (●), villages (■), and production sites (▲); where hollow icons represent sites with no good-candidate radiocarbon dates (for site names see Table 4-1).

1. Balan-ri	11. Hangsa-ri	21. Pungnab
2. Daeseong-ri	12. Highway 45	22. Shindoshi
3. Dangha-ri	13. Janghyeon-ri	23. Unyangdong
4. Deokhyeon-ri	14. Jangjidong	24. Wadong-ri
5. Dongpangyo	15. Jigeumdong	25. Yangchon
6. Gajae-ri	16. Kiandong	26. Yangsu-ri
7. Gilmyeong-ri	17. Mangweoldong	27. Yeongdeok-ri
8. Gogeumsan	18. Misa-ri	28. Yeoweoldong
9. Gongse-ri	19. Nakyangdong	
10. Gwangseok-ri	20. Nongseo-ri	

Table 4-1: List of sites appearing on maps in this chapter.

dates but no strong cases.

One site, Pungnab Fortress, requires special note due to its longevity, with relevant activity spanning from 100 BCE to 475 CE. Other sites are treated as single units, meaning some span the analysis of both Late Iron Age and Baekje Periods. At Pungnab however contexts are strictly assigned to a period. Stratigraphic evidence at Pungnab allows such distinctions,, although a degree of simplification must be acknowledged. At other sites, with more dispersed settlement patterns, more exact periodization is not easily parsed.

Figure 4-13: The landscape setting of the Janghyeon-ri site, located to the right of the highway and at the foot of a low mountain (Central Institute of Cultural Heritage, 2010: colour photo 1-1, p. i).

As presented in Figure 4-12, villages and hamlets predominated during the LIA, along with

five isolated production sites that were not directly related to any particular settlement[5]. Of eight villages, seven cluster relatively closely on the Han River or one of its major tributaries. Fifteen hamlets are scattered throughout the area. All sites are located on alluvial plains, and many are directly adjacent to waterways or within 2-3 kilometers (Fig. 4-13); settlements in the less mountainous Hwaseong region being an exception to this trend.

4-ii-i: Compounds and Architectural Projects

While hamlets and villages do often appear to have had particular residence clusters, on the whole it is difficult to argue for the presence of any demarcated compounds or visible boundaries separating clusters. Two exceptions are the sites of Janghyeon-ri and Balan-ri, where each site has one residence cluster that appears to have been at least partially enclosed by ditches. At Janghyeon-ri the stratigraphic relationships of the ditches indicate a lack of permanence, with any potential boundary falling in and out of significance relatively quickly (see Fig. 4-14i). The enclosed residence cluster is the longest lived judging by the intensity of house re-building. However its residents had no privileged access to status signifiers and were not engaged in more intense feasting. The situation at Balan-ri is similar; a residence cluster bounded by ditches. In this case though, the residents were more engaged in importing non-Mahan pottery styles relative to other residence groups.

It needs to be noted however that, because of their more ephemeral nature, the ditches noted above may have had drainage or other functions. Their layouts perhaps incidentally resembling boundary features. Even if the ditches were dug to bound some particular cluster, the boundaries were not substantial, and people would be able to step over parts of them easily (most is 1m or less in width, and some portions are less then 30cm across). The space

[5] For overview of sites and the resources used see Appendix 1.

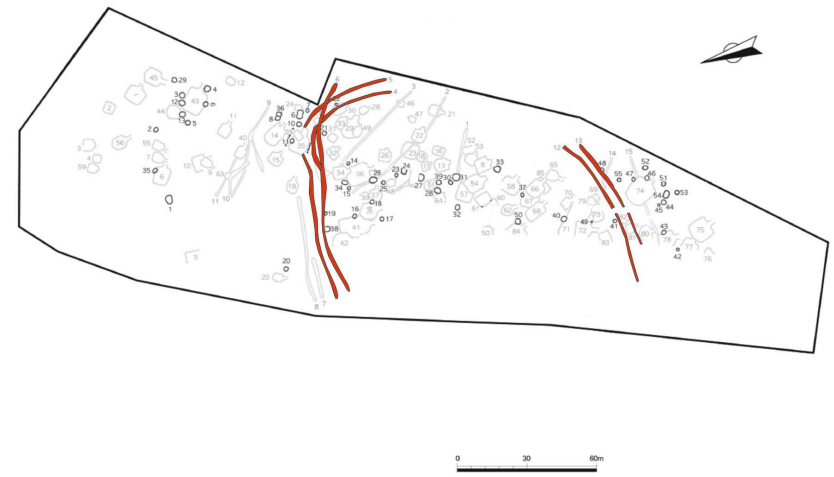
inside also remains open and visible, making it difficult to argue that the relevant residence clusters were of a distinct social rank compared to the surrounding households, and certainly not over an extended period of time.

The sites of Pungnab and Daeseong-ri have evidence for relatively substantial architectural projects unseen on any other site in the study area. At the lowest cultural level of Pungnab a 100m stretch of three parallel ditches[6] has been unearthed in an area of the site 450m to the southeast of the known LIA settlement activity (Fig. 4-14ii). Estimating the diameter of a hypothetical completed ditch would, following the presumed curvature, give a result of approximately 200m. Yet this figure is conjectural, there were not enough of the ditches remaining to obtain a good estimate (see Fig. 4-14ii); although the 200m estimate is the minimum, assuming that the ditches loop around immediately before/after the excavated sections.

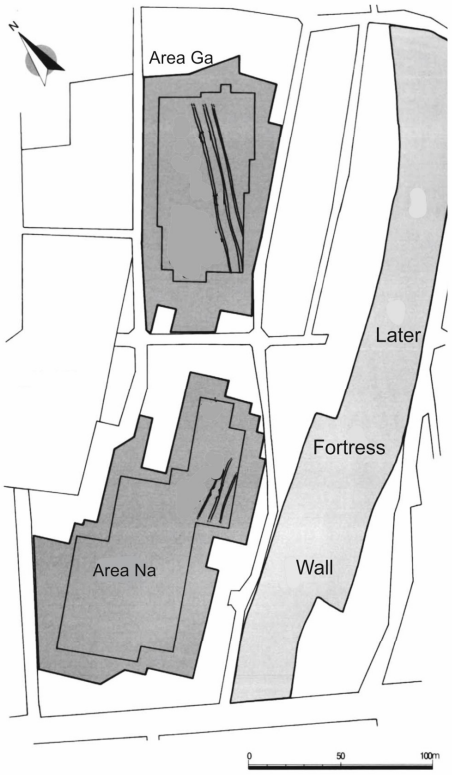
S-b. Park (2010: 39) and H-w. Lee (2018: 258) argue for the ditches being evidence of Pungnab having been a central settlement or polity capital, with Lee (2018) linking Pungnab's features with apparent ritual spaces inside concentric ditches from the Bronze Age onwards. Regarding H-w. Lee's (2018) point, there is some consistency with the form of the ditches at Pungnab and other apparent ritual or specifically bounded spaces from the LIA (outside the study area). Yet the project at Pungnab would be over an order of magnitude larger in area, with the space at Yeongdeung-dong in Iksan, located around 180km south of Pungnab, being only 35m in diameter.

Both S-b. Park (2010: 40) and H-w. Lee (2018: 247-8) suggest that a similar space can be seen at the Misa-ri site. They point to two ditches, 54m apart, seemingly running parallel,

[6] Each ditch is 1.6-2.2m wide and around 1m deep.



(i)



(ii)

Figure 4-14: (i) possible household cluster boundary ditches at Janghyeon-ri site (modified from Central Institute of Cultural Heritage, 2010: 15, Fig. 5); (ii) stretch of triple-ditch at Later Iron Age level of Pungnab site (modified from National Research Institute of Cultural Heritage, 2001: 42, Fig. 2).

arguing that the ditches are bounding a square ritual or central space, despite there being no evidence of connecting ditches. The ditches in question are 30-40cm wide and 10-15cm deep, and the morphology of the proposed space is not consistent with the examples at Pungnab, Iksan, or earlier sites discussed by Lee (2018); the ditches would make a square rather than a circle/oval, are singular rather than having accompanying concentric ditches, and are much less substantial in width and depth (they would have been barely visible even at a relatively close distance). I therefore see no evidence supporting the proposition of a central or ritual space at Misa-ri, and suggest these ditches to be drainage features associated with the nearby post buildings, a pattern (a 'square' containing storage structures) which can be seen elsewhere on the site.

At Daeseong-ri a straight 93m long section of palisade wall or wooden fence may be identified running east-southeast to west-northwest, consisting of a linear ditch containing post holes (around 1m in diameter, 20-50cm deep) approximately every three metres. The excavators suggest that the wall was both for defence and to divide the northern and southern parts of the settlement (Gyeore Institute of Cultural Heritage, 2011: 247). However, the extent of the wall, or whether it was complete, is unknown due to the restricted survey area; there is no evidence of a wall or ditch elsewhere on the site. Still, the wall does appear to continue on its trajectory out of the excavation area and must represent a significant local investment of time, materials, and an organization of labour not evident on other sites.

4-ii-ii: Status-Reputational Symbols

Site ubiquity scores for status signifiers make it clear that individuals or household groups on some sites were more able to more consistently acquire status-reputational symbols than those from other settlements (Fig. 4-15). Based on the data it may be tempting to argue for a

two level site hierarchy, however distinctions appear primarily to be between villages and hamlets (and production sites). Seven of eight villages (88%) have such items, but only four of 15 hamlets (27%) have the same. Residents of hamlets therefore appear less likely to have had status goods, but they were not precluded from having them. Those in villages may simply have had relatively more opportunities to procure these types of items. Still, multiple 'centres' appear identifiable in the west, east, south and central parts of the study area.

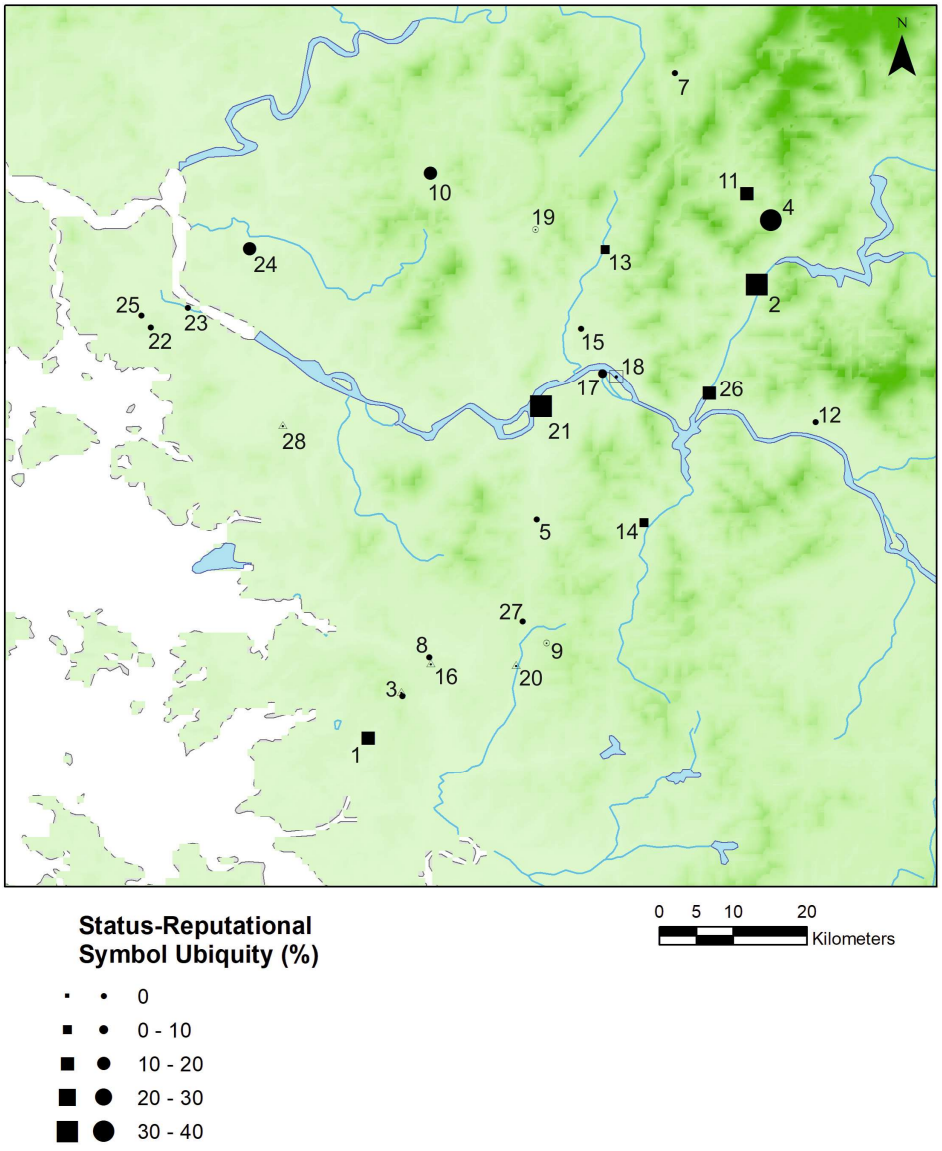


Figure 4-15: Status-representational symbol ubiquity scores on Later Iron Age sites (see Table 4-1 for site names).

Villages were longer lived and had larger populations, hosting more residence clusters over their lifetimes, making it more likely for status signifiers to appear within them. A random distribution of status goods into the region's household clusters would result in a relative concentration of such items within villages. In the study area 77% of all houses are in villages (n = 350) and 23% in hamlets (n = 103). If each house had a hypothetical 10% chance of containing a status good, every village would likely have multiple houses with status goods. On the other hand, probability-wise, not all hamlets could have such randomly assigned status goods, and a handful of larger hamlets would have multiple houses with status items. Thus, rather than inherently being centres of political power, the concentration of status goods within villages may have been a byproduct of the fact that autonomous households congregated there over time.

Site (site number)	Site Type	No. Domestic Contexts	Ubiquity (high level goods)	Ubiquity (without Lelang Pottery)	Spatial Distribution
Daeseong-ri (2)	Village	54	31.5	18.5	scattered
Pungnab (21)	Village	23	34.8	8.7	multicentric
Wadong-ri (24)	Hamlet	17	17.6	11.8	multicentric
Yangsu-ri (26)	Village	27	11.1	7.4	monocentric
Gwangseok-ri (10)	Hamlet	7	14.3	14.3	singular
Janghyeon-ri (13)	Village	85	3.5	3.5	multicentric
Deokhyeon-ri (4)	Hamlet	3	33.3	33.3	singular
Hangsa-ri (11)	Village	47	12.8	10.6	multicentric
Balan-ri (1)	Village	59	10.2	5.1	multicentric
Mangweoldong (17)	Hamlet	10	10.0	10.0	singular
Misa-ri (18)	Village	39	17.9	15.4	multicentric

Table 4-2: Ubiquity scores and site level distributions of status signifiers on sites with at least one context containing such artefacts (site number correlates with Table 4-1); sites in italics have no clear radiocarbon dates.

Even though multiple centres attracting status-reputational symbols can be identified, the

sites of Pungnab and Daeseong-ri may be seen as having notably high ubiquity scores (34.8% and 31.5% respectively). However these figures are based one particular category of evidence, the presence of pottery imported from areas occupied by the Chinese commanderies (primarily Lelang, but also possibly Daifang). If this category is removed the differences in ubiquity scores flatten off significantly (see Table 4-2). The implications of this pattern are discussed further below; however certain households at these two sites clearly have a particularly high level of interaction with the Chinese authorities. A much different relationship than actors on other sites had is thus in evidence (discussed further in Ch. 7).

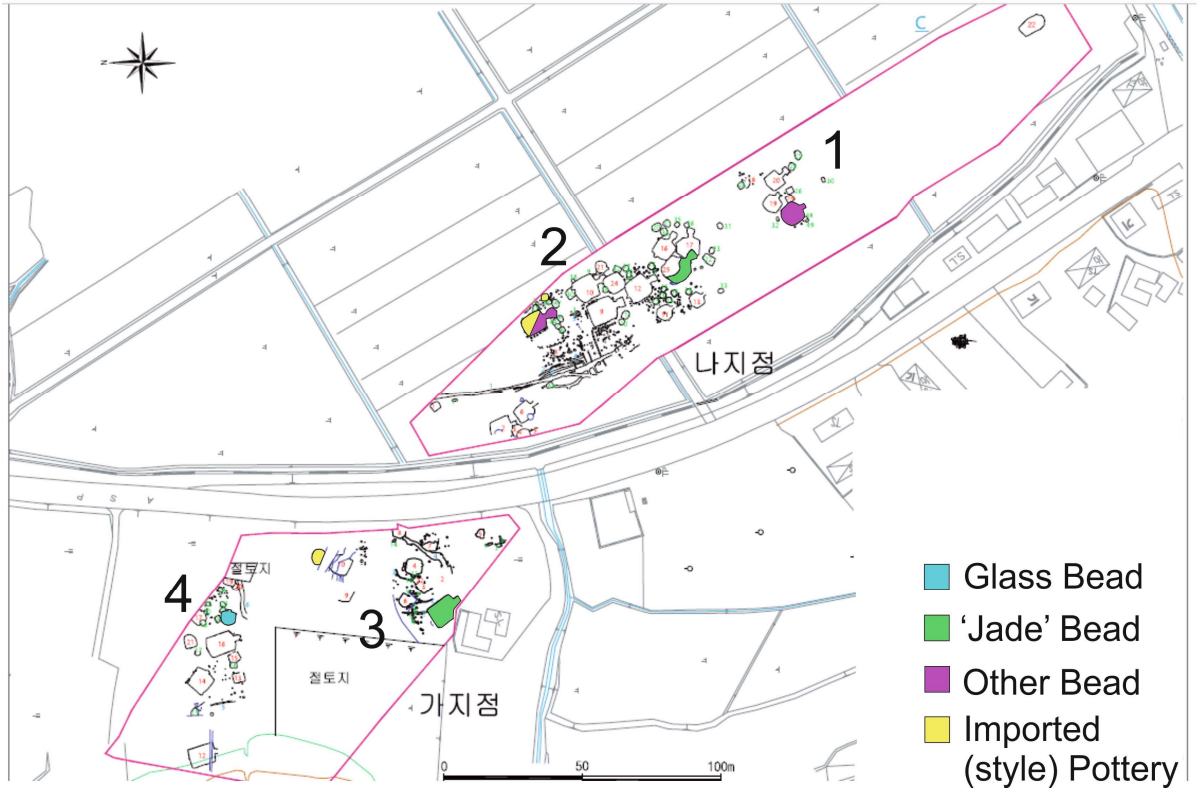


Figure 4-16: Distribution of contexts containing status signifiers on the site of Hangsi-ri; numbers signify probable housing clusters (modified from Korea Institute of Heritage, 2010: Fig. 1, p. 46).

Cluster	Glass Beads	'Jade Beads'	Other Beads (agate, amber)	Import (style) Pottery
1			1	
2		1	1	2
3		1		1
4	1			

Table 4-3: The number of contexts in each housing cluster at Hangsa-ri that contain particular status goods (see Fig. 4-16)

On the individual site level the majority of sites show a multi-centric distribution of status-reputational symbols (see Table 4-2). Figure 4-16 shows an example of this type of distribution at the site of Hangsa-ri (also see Table 4-3). In contrast, four sites have only a single locus, yet three of these examples are small hamlets with only one context containing likely status signifiers. Among residence clusters on individual sites a pattern analogous to that on the regional level may be noted, with certain clusters having high concentrations of status signifiers but differences sitting on a gradient rather than in kind (see Fig. 4-16).

4-ii-iii: Meeting and Eating

As seen in Figure 4-17, there is a broad equivalence in the prevalence of serving vessels on almost all sites across the study area. This pattern holds on all types of site, and while some show a higher proportion of serving vessels than others, various hamlets have parity with larger settlements in terms of the evidence for feasting activity. In other words, communal food consumption occurred at similar intensities regardless of settlement type. People were therefore not travelling to lager central villages to participate in feasting, meaning the focus was likely household-to-household rather than larger communal events.

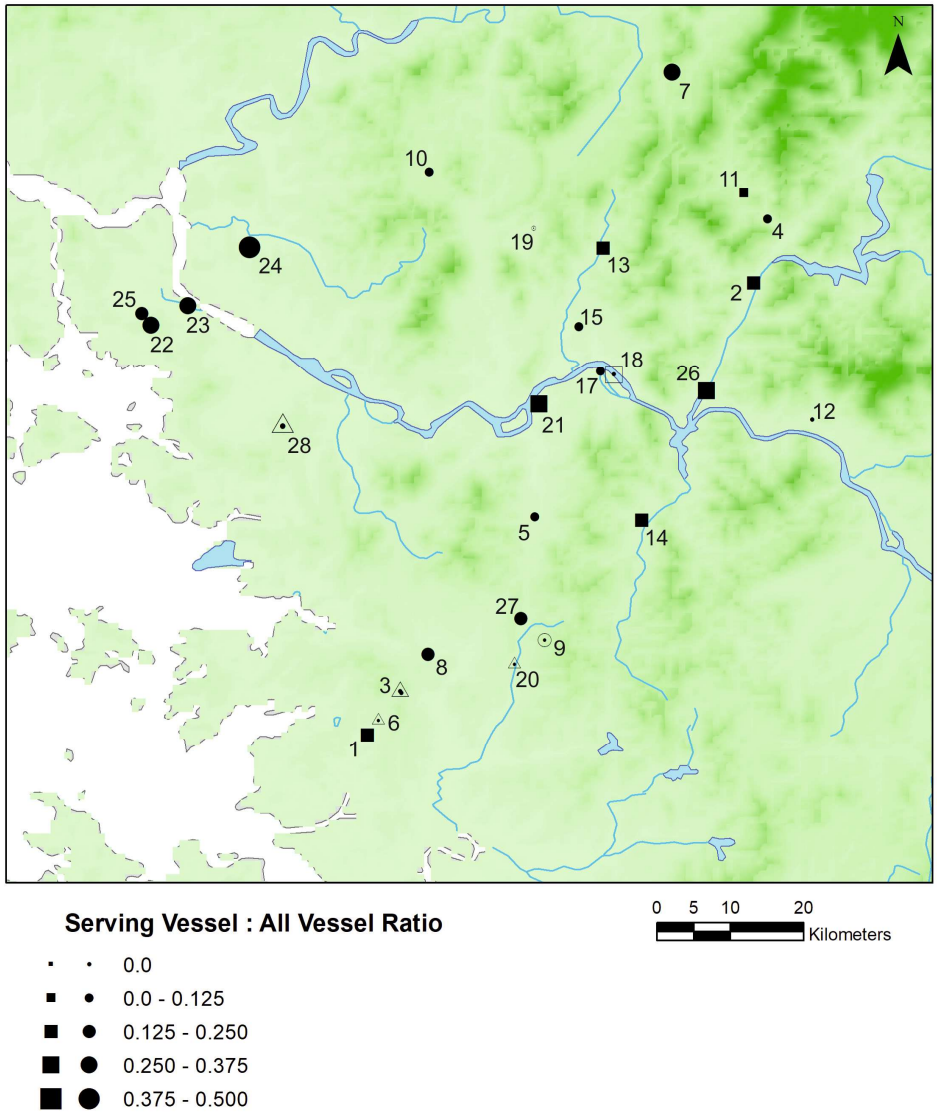


Figure 4-17: Map presenting all sites' serving vessel-to-all other vessel ratio scores (see Table 4-1 for site names).

The regional pattern for stylized greyware serving vessels is not discussed for the LIA. As explained above, Baekje pottery is yet to emerge. The distribution of such greyware would therefore simply reflect the presence of Lelang-style pottery discussed in the previous section.

Of 21 sites with identifiable serving vessel sherds 12 show a multicentric or scattered

distribution (57%), five have a monocentric distribution (24%), and on four sites only a single domestic feature has serving vessel evidence (19%) (see Table 4-4); yet in the latter category all four sites are small hamlets with 6 or fewer sherds. Of the nine sites with more than 10 serving vessel sherds seven have multicentric or scattered distributions. As with the status signifiers, some clusters on those sites have higher concentrations of serving vessels, however the difference remains one of degree rather than kind.

Site (site nuber)	Site Type	Serving Vessel Distribution	No. Serving Vessels	% Serving Vessels in House Contexts
Misa-ri (18)	Village	Multicentric	127	55.9
Wadong-ri (24)	Hamlet	Multicentric	109	36.7
Balan-ri (1)	Village	Multicentric	101	59.4
Daeseong-ri (2)	Village	Multicentric	92	71.7
Pungnab (21)	Village	Multicentric	85	80.0
Janghyeon-ri (13)	Village	Scattered	83	95.2
Yangsu-ri (26)	Village	Monocentric	50	100
Hangsa-ri (11)	Village	Multicentric	37	81.1
Jangjidong (14)	Village	Monocentric	14	78.6
Gogeumsan (8)	Hamlet	Monocentric	8	37.5
Unyangdong (23)	Hamlet	Singular	6	50
Shindoshi (22)	Hamlet	Multicentric	5	100
Gilmyeong-ri (7)	Hamlet	Singular	4	100
Dongpangyo (5)	Hamlet	Monocentric	4	100
Gwangseok-ri (10)	Hamlet	Multicentric	3	100
Deokhyeon-ri (4)	Hamlet	Monocentric	3	100
Gongse-ri (9)	Hamlet	Scattered	3	100
Mangweoldong (17)	Hamlet	Singular	2	100
Yangcheon (25)	Hamlet	Multicentric	2	100
Yeongdeok-ri (27)	Hamlet	Multicentric	2	100
Jigeumdong (15)	Hamlet	Singular	1	0

Table 4-4: Site-level distributions of serving vessels and the contexts these ceramics were found in (site number correlates with Table 4-1); sites in italics have no clear radiocarbon dates.

At almost all settlements feasting primarily occurred within houses, indicating the high prevalence of inter- and intra-household communal activity. Table 4-4 shows that at the

majority of villages or hamlets over 70% of serving vessels on a site were found in within domestic architecture. The vast majority of relationships and interaction would therefore have been peer-to-peer or household-to-household, within the more intimate confines of the house. The implications regarding social evaluation, alliance making, and the use contexts of status signifiers are developed in Chapter 7.

Three notable exceptions are the sites of Misa-ri, Wadong-ri and Balan-ri, where more significant amounts of serving vessels were concentrated in pits, ditches, or structured deposits. All three sites span the LIA and Early Baekje periods, so this pattern may be reflecting diachronic change in the social context of feasting activity that will be discussed later (see Chapters 5 and 7). In addition however, both Wadong-ri and Balan-ri have evidence of ritual specialist activity, with structures containing bronze bells and other items (see Fig. 4-3). Misa-ri also has one context with a bronze mirror. This distinction in the setting of feasting activity and the presence of bronzes may indicate a distinct type of communal action on these sites, separate from the feasting located within houses. Chapter 7 discusses the possibilities in more detail, including the probability that ritual specialists may have acted as particular authorities within these villages and the surrounding areas.

Both Wadong-ri and Misa-ri have candidate meeting places or pavilions, which may have influenced the levels of public versus private modes of feasting visible in the data. Wadong-ri had a small circular ditch feature (see Ch. 7) while Misa-ri had a candidate pavilion. However the candidate pavilion at Misa-ri[7] does not contain a high concentration of serving vessels, nor do the features associated with it. Instead, this building was spatially associated with domestic architecture containing relatively high concentrations of serving vessels. This

[7] Misa-ri: Area B Post Building No. 5 (Volume 3).

structure is therefore likely not a pavilion but a larger-than-average storage facility, supplying the more intense feasting occurring within and around the associated houses.

4-ii-iv: Storage

Formal storage facilities are found throughout the study region, although only on ten sites from a total of 28. Just four sites (Misa-ri, Balan-ri, Daeseong-ri, Wadong-ri) contained 92.6% of the total number of storage features found, and the distributions of storage facilities on all of these sites is either multicentric or scattered (Table 4-5). Facilities were attached to specific domestic clusters or spread across the settlements with no clear pattern. Storage was therefore either under the control each household cluster within a village or hamlet, or more expedient, being positioned wherever a good space lay. Organization of storage by some overarching authority is therefore not evident.

Site (site number)	Site Type	Total Storage Features	% Features for Storage	Storage Facility Distribution
Misa-ri (18)	Village	59	25.9	multicentric
Gogeumsan (8)	Hamlet	1	20.0	singular
Yeoweoldong (28)	Production (field system)	2	18.2	monocentric
Jigeumdong (15)	Hamlet	2	15.4	monocentric
Balan-ri (1)	Village	45	12.9	scattered
Daeseong-ri (2)	Village	14	11.3	multicentric
Gwangseok-ri (10)	Hamlet	1	10.0	singular
Shindoshi (22)	Hamlet	3	5.4	multicentric
Wadong-ri (24)	Hamlet	8	4.4	scattered
Jangjidong (14)	Village	1	3.9	singular

Table 4-5: All LIA sites in the study region with storage features (including site-level distributions and the prevalence of storage features on each site – site number correlates with Table 4-1); sites in italics have no clear radiocarbon dates.

The relatively low numbers of storage facilities outside these four sites, and the low

proportion of dedicated storage features in relation to total site features (Table 4-5), indicate a likely sequestering of foods within households. Indeed, in a study that has significant overlap in target sites, M. Kim et al (2016) identify high proportions of what they identify as storage vessels within household assemblages (Misa-ri being significant exception; see their Table 1: p. 131).

DeBoer (1988: 2, 11) notes that one role of subterranean storage is to conceal food from others, be they non-residents or other villagers. In contrast, post buildings or storage bins are openly visible, as will be the activities related to them. At Balan-ri and Wadong-ri the overwhelming majority of storage facilities are just such openly visible structures (86.7% and 100% respectively), while at Daeseong-ri only 21.4% of storage facilities fit this profile. Misa-ri has a more balanced pattern, where 62% of facilities are the more visible structures. Referring to the previous section, it can be noted that the three sites with a higher proportion of publically visible storage facilities are also those with lower household focus regarding feasting; reinforcing that these three sites are spaces where public communal feasting was a more prominent activity, possibly part of a distinct area of action or world of authority (see Ch. 7).

4-ii-v: Production Activities

Fourteen sites have evidence of metalworking, metal production, or pottery making (Fig. 4-18). Four are dedicated production sites, two are hamlets, and all eight villages show evidence of such activity. As with other lines of evidence therefore, hamlets are not precluded from being places where crafting is taking place; although only a minority of these sites yield any evidence.

From Figure 4-18 three zones may be highlighted, (i) to the west at the mouth of the Han

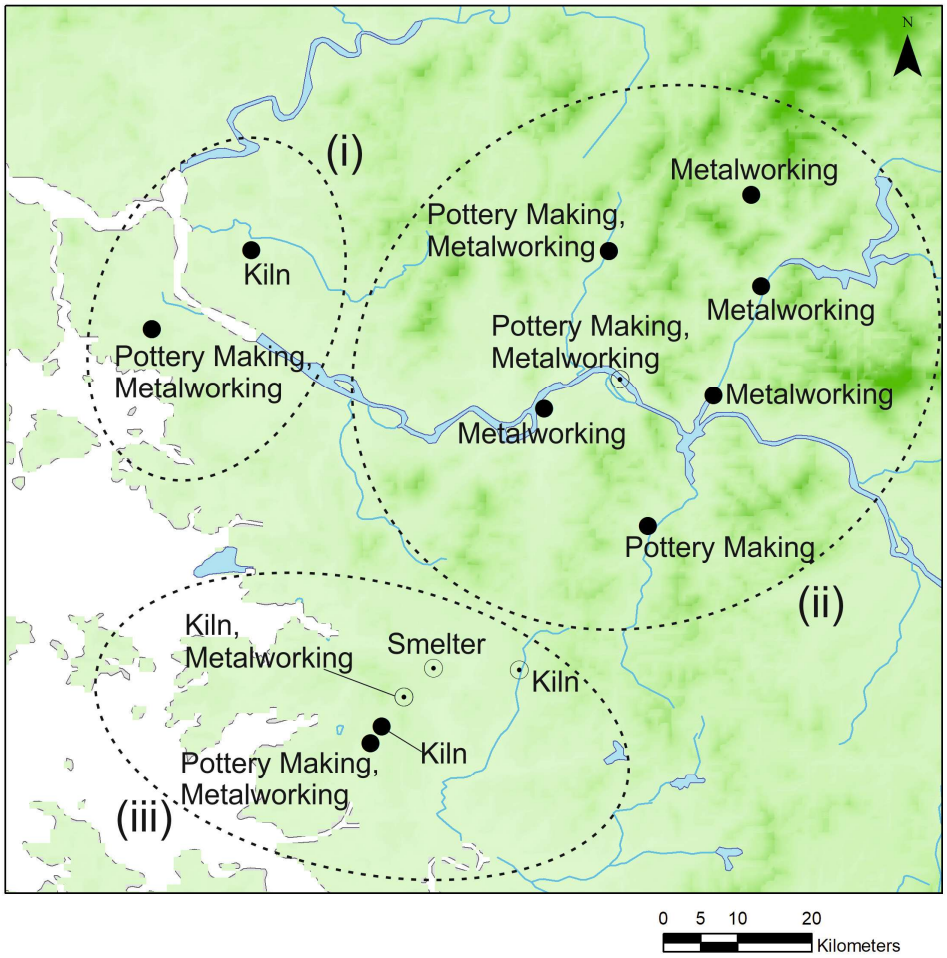


Figure 4-18: Regional distribution of pottery and metal production sites, facilities, and sites with evidence of production activities; three zones can be proposed, (i) Han River estuary, (ii) lower Han River and its tributaries, and (iii) Hwaseong plains.

Site (site number)	Site Type	Types of Production	Distribution of Activity
Balan-ri (1)	Village	Metal (crucibles, slag, blast pipe fragments)	multicentric
Wadong-ri (24)	Hamlet	Pottery (kilns, wasters), Cloth	balanced multicentric
Misa-ri (18)	Village	Metal (slag), Pottery (anvils, wasters), Glass (bead mould)	balanced multicentric
Pungnab (21)	Village	Metal (iron waste), Cloth	balanced multicentric
Janghyeon-ri (13)	Village	Metal (blast pipe fragments, iron waste), Pottery (anvil, wasters), Cloth	scattered
Jangjidong (14)	Village	Pottery (wasters)	singular
Hangsa-ri (11)	Village	Metal (crucibles)	monocentric
Daeseong-ri (2)	Village	Metal (crucibles, slag, iron waste), Cloth	scattered
Yangsu-ri (26)	Village	Metal (slag, crucible), Cloth	monocentric
Shindoshi (22)	Hamlet	Pottery (anvil), Metal (waste iron)	unknown[8]

Table 4-6: Types and distributions of production activities on settlement sites (site number correlates to Table 4-1); sites in italics have no clear radiocarbon dates.

[8] Pottery anvil and metalworking waste found in bulk; location unrecorded.

River, (ii) around the mid-stream of the Han River including its major tributaries, and (iii) to the south of the study area in the Hwaseong region. All three zones have evidence for both pottery making and metalworking or manufacture, however tangible evidence of manufacturing facilities (kilns, smelters) are concentrated in the Hwaseong region. G. Kim (2017: 102) notes this region as relatively rich in iron ores (in contrast to the Han River basin), evidenced by the presence of the smelting site at Kiandong. The nature of metalworking in the mid-Han River area is less clear, but at certain sites there blast pipe fragments (Janhyeon-ri) or large slag deposits (Misa-ri) have been found, likely evidence of smelting or refinement. If sites on and north of the Han River were in fact unable to obtain and process iron ores then cloth spinning may have provided a basis for the relationship with Hwaseong or other iron rich regions, as reflected by high spindle whorl ubiquity scores (Fig. 4-19). The two regions may therefore have had some degree of reciprocal balance in production activities, with settlements in the north exchanging cloth and settlements in the south exchanging iron goods.

On the site level production activity was predominantly distributed in multicentric or scattered patterns (see Table 4-6). On some sites it appears that artisans within the same houses or residence clusters were producing multiple types of good (e.g. Yangsu-ri, Daeseong-ri, Janghyeon-ri). In other cases artisans were more narrowly specialized, with people working specific materials (e.g. Misa-ri, Pungnab, Wadong-ri, Hangsa-ri). Finally, distributions of craft activity broadly follow the on-site distributions of the three other categories of evidence discussed above. In other words, crafting, feasting, and the ability to procure status signifiers tend co-occur (further discussed in Ch. 7).

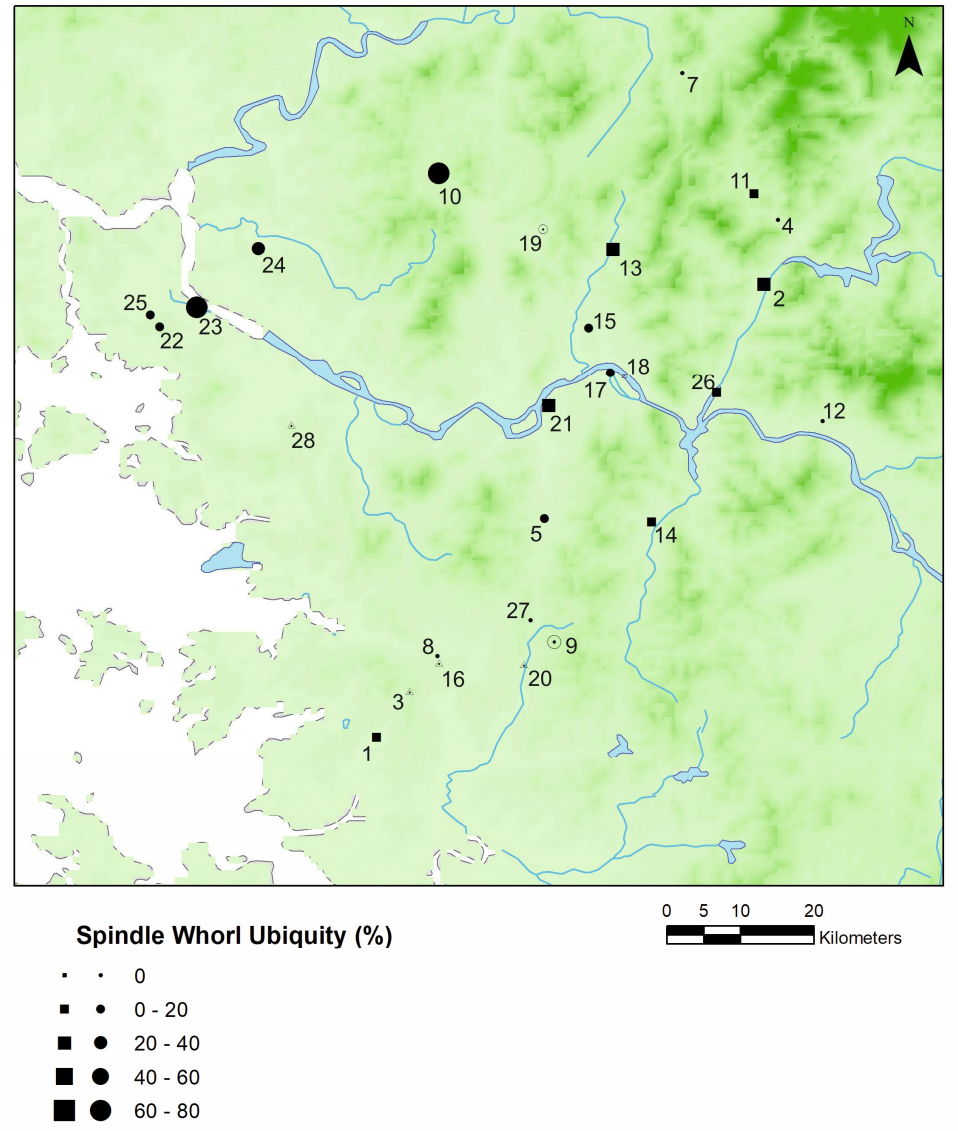


Figure 4-19: Spindle whorl ubiquity scores on LIA sites (see Table 4-1 for site names).

4-iii – Heterarchical Tendencies in the Han River Basin and Hwaseong Region

There is a significant overlap between the archaeological patterns of the LIA in the study area and the expectations of socio-political heterarchy, on both regional and site scales. Multiple centres may be identified at both scales, and differences among sites in terms of intensity of feasting activity tend to be in degree rather than kind. The lack of any qualitatively distinct elite compounds or public architecture underlines the lack of obvious social ranks. Distributions of status signifiers make it hard to argue for central clusters of different rank monopolizing access to status goods over extended periods of time. Residence clusters on sites, or indeed entire settlements in the case of certain hamlets, either co-exist with other equivalent centres or show relatively rapid and fluid shifts in status and/or population.

Peoples' access to various kinds of status or authority must have been comparatively open, but also difficult to sustain over the generations. Chiefs in any of the traditional understandings of the word, or in terms of how the historical texts relating to Mahan are normally interpreted, are not in evidence here. For example, no large feasting centres can be identified. Nor is there evidence of individuals or individual households hording surplus to sponsor larger public/ritual feasts for commoners or retinues. Obviously exclusive access to symbols of authority is also absent.

The archaeological patterns highlighted in this chapter contrast strongly with the expectations of a hierarchical chiefdom model for Mahan. On the site level, the kinds of demarcated central compounds, monopolies over status or exchange goods and food storage, and larger scale redistributive feasting characteristic of sovereign-like power cannot be identified. On the regional level, consistent site hierarchies are difficult to discern, showing multiple similar centres or multiple types of centre. Certain aspects of simple chiefdom or big man models

may be applicable however, with particular sites or housing clusters having more intense feasting or more consistent participation in exchange networks. Yet, based on the settlement evidence at least, a systemic chiefly or elite class cannot be identified, and multiple types of and pathways to authority existed in Mahan (see Ch. 7-i).

A crucial feature of a social group organized via natural or epistemic authority is the high autonomy held by individual social units, a trait underscored here by two patterns; household-centric feasting and the diversity of status signifiers. The lack of obvious or formalized meeting places and the concentration of serving ceramics within domestic contexts (with significant exceptions – see above and Chapter 7) indicates that the setting for most face-to-face meeting and communal eating was within individual households and/or household clusters. The primary unit of organization therefore appears to be the individual household, each cultivating pointed household-to-household or household-to-other relationships, exchanges, or alliances. That various small hamlets have similar proportions of serving vessels to larger settlements, and were able to procure status signifiers, suggests that households within these settlements also had autonomy, and were not simply subordinate to someone living in a larger village.

Import-style Ceramics	Black Burnished Pottery	Jade Beads	Glass Beads	Other Beads	Bronze Mirror	Ritual Bronzes	Ring-Pommel Sword	Misc.[9]
7.8%	2.7%	2.7%	2.2%	1.9%	0.3%	0.5%	0.3%	0.5%

Table 4-7: Region level ubiquity scores; aggregating sites with at least one context containing high level goods (11 sites, 371 contexts).

[9] Including a bone flute and bronze hair pin.

Diverse materials related to likely worlds of authority are in evidence throughout the study region during the LIA, including different ceramic wares, various types of bead, and probable ritual implements (see Table 4-7). The relatively high occurrence of import-style ceramics indicates some emphasis on the making of exchange links with external actors, in this case specifically the Chinese commanderies in the north. The likely importance placed on forging external links is perhaps more clearly underlined by the diversity in types of bead found in the study area.

Beads as status signifiers will be discussed more deeply in Chapter 7; however the variety of materials from which LIA beads were made (jade of various types, glass, agate, amber, and shell) suggests people were participating in multiple different exchange networks independently. Beads themselves, although sourced from diverse networks, may have been a meaningful signifier within specific worlds of authority, or the ability to procure beads from certain networks or sources underpinned authority claims (or some parts of both). In both cases autonomous actors were seeking and maintaining relations with other people to secure their own access to beads, and in many cases different clusters were doing this on the same site.

Although the social networks involved in procuring beads were diverse, direct relations with the Chinese commanderies were dominated by two sites. Almost two-thirds of regional domestic contexts containing Lelang-style pottery are at Pungnab and Daeseong-ri. Indeed, in terms of status-reputational symbols, interaction with the Chinese authorities on the northern half of the peninsula defines Pungnab (see Table 4-2), although we may lack the whole picture since only around 13% of the total site area has been surveyed (Kim et al, 2016: 130). As described in the next chapter (also Ch. 7), the site becomes a very important place during the Early Baekje Period, and both the concentration of Lelang-style pottery and the presence

of the triple-ditch feature point to the importance of the site during the LIA.

However, we should be wary of overstating the centrality of Pungnab during the earlier period due to its clear importance later in time. The site is one important place among many, and the types and scope of activities happening within the village were narrow when viewed in terms of the diversity activities and connections over the regional scale. The role and scope of the triple-ditch feature is unclear, and whether the project was even finished is unknown. The fact that the ditch area becomes a site for settlement and production during the Early Baekje Period suggests the project was unfinished or its significance quickly declined, probably in favour of building the fortress walls (see Fig. 4-14ii).

In summary, the archaeological material and associated patterns discussed in this chapter conform well to the expectations of socio-political heterarchy. The presence of multi-centric or cycling loci of activity, a high apparent autonomy for social units, graded distinctions in status rather than clear ranks, and multiple probable fields of authority (indexed by a diversity in likely status signifiers) all point to heterarchical modes of organization. The next chapter will show some very obvious changes during the emergence of the Baekje state, however a degree of continuity is also highlighted, with the principles of natural authority being maintained in various fields of action to some degree.

Chapter 5

The Emergence of Baekje in the Han River Basin (AD 250 – 475)

Archaeological and textual evidence supports the proposition that Late Iron Age (LIA) society in the Han River basin and Hwaseong was heterarchical in nature, although further work on cemeteries and funerary practices is needed to gain a full picture. Here though, I will use the same lines of evidence to probe the organization of the subsequent Early Baekje Period. This analysis offers insight into how a heterarchical society may have developed into an apparently hierarchical kingdom or state.

As noted previously (see Ch. 1), Baekje was first recorded as a significant peninsular power at AD 372 in the *Jin Shu* 晉書, having emerged as a polity with a named and recognized 'king' sometime between AD 290 and AD 372 (also Best, 2006: 25). Diplomatic relations with the Japanese archipelago were also being conducted sometime between the second half of the 4th century and the early 5th century, evidenced by an inscribed seven-branch sword was gifted by Baekje to the Yamato King in Japan in the name of "the King of Baekje and his heir (百濟王世子)[1]". The date of this gift has often been proposed as CE 369 (Hirano, 1977: 68-70; Best, 2006: 67-8), although X-ray analysis of the sword, which revealed previously hidden/unclear inscriptions, indicates a date in the early 5th century (Hong, 2009; Best, per. comm.). Thus, by the later 4th-to-early 5th century it can reasonably be assumed that Baekje had a king that represented the polity in dealings with other actors and some form of bureaucracy able to organize such diplomatic expeditions (including procuring the requisite gifts).

[1] Hirano (1977: 68) provides a transcription and translation of the sword inscriptions.

But what processes precipitated the change from a society with multiple lines of authority to a society with just one? Or did remnants of heterarchical organization remain within the Baekje state, masked by the textual focus on the doings of kings? Such socio-political change was in no way inevitable, and particular events or social processes precipitated those changes and sustained a new form of organization. Comparing the archaeological data from Early Baekje with expectations from the socio-political heterarchy model allows these questions to be addressed. Tracking diachronic change via a multi-scalar view of past lifeways takes the emphasis off the Baekje centre (at Pungnab-Monchon) and so allows an appreciation of alternative modes of organization, i.e. not simply the accrual of authority by a central actor.

The Three Kingdoms Period is often placed as beginning *circa* AD 300 (e.g. W-Y. Kim, 1986; Nelson, 1993a; Barnes, 2001, 2015: 22)[2]; however this study will span AD 250 AD to 475 AD, after which the Early Baekje Period comes to a close with the sacking of its capital. The reasons for starting at this date are twofold; (i) that in the Korean literature, identified via developments in pottery types and domestic architecture, the first phase of Early Baekje is commonly dated as mid-to-late 3rd century (S-b. Park, 1997; 2001a: 106; S-n. Kim, 2004; Park and Lee, 2011; Song, 2013a), and (ii) that the 250 AD is the boundary for the earliest possible phase of work on the Pungnab fortress wall (see below). A cut-off of AD 250, rather than AD 300, is therefore judged as being the most likely to give insight into social changes occurring in the formative phase of Early Baekje.

Sites with evidence of Historic Early Baekje period activity, i.e. those lasting beyond AD 400 (see Ch. 1; Table 1-2), will, in some cases, be examined separately in order to probe what could be seen as the final form of Early Baekje. As noted above and discussed in Chapter 1-i-

[2] An exception is Müller (2018), who places the start of the Three Kingdoms Period at c AD 400.

iv, after this date Baekje apparently had a royal court, the apparatus necessary to sustain a court and its diplomatic activities, and systematic court record keeping had assuredly begun. Historical records can also be taken as more secure from this period. Examining the period after CE 400 as a distinct phase thus offers a view of Baekje during a time when some form of state apparatus was securely established.

This chapter will therefore present the same analyses as the last chapter, but on sites between AD 250 and AD 400 and sites post- AD 400. Significant changes in some aspects of social organization are apparent, yet other elements show constancy. The latter part of the chapter will focus down, compare the organization and activities on five sites of interest that the main analysis highlights as centres of feasting activity and places where status signifiers were procured in relatively high quantities. Commonalities and divergences among these sites offer insight into the processes of Baekje emergence and polity organization, issues discussed in detail in Chapter 7.

5-i – Change and constancy on regional and site levels

As shown in Figure 5-1, the Early Baekje period saw significant change through the appearance of four earthen walled fortresses and a general growth in the numbers of all types of site[3]. Three of the fortresses lie almost directly on the Han River while one occupies the Hwaseong plain within 5km of a minor waterway running into the Yellow Sea. Away from the fortresses, villages (9 in total) and hamlets (19 in total) continue to dominate the landscape, and primarily remained on alluvial plains next to or near waterways. The majority of this growth concentrated in the southern part of the study area, where a number of new hamlet, village and production sites appear on the Hwaseong plain and at Yongin (see Fig. 1-

[3] For overview of sites and the resources used see Appendix 1.

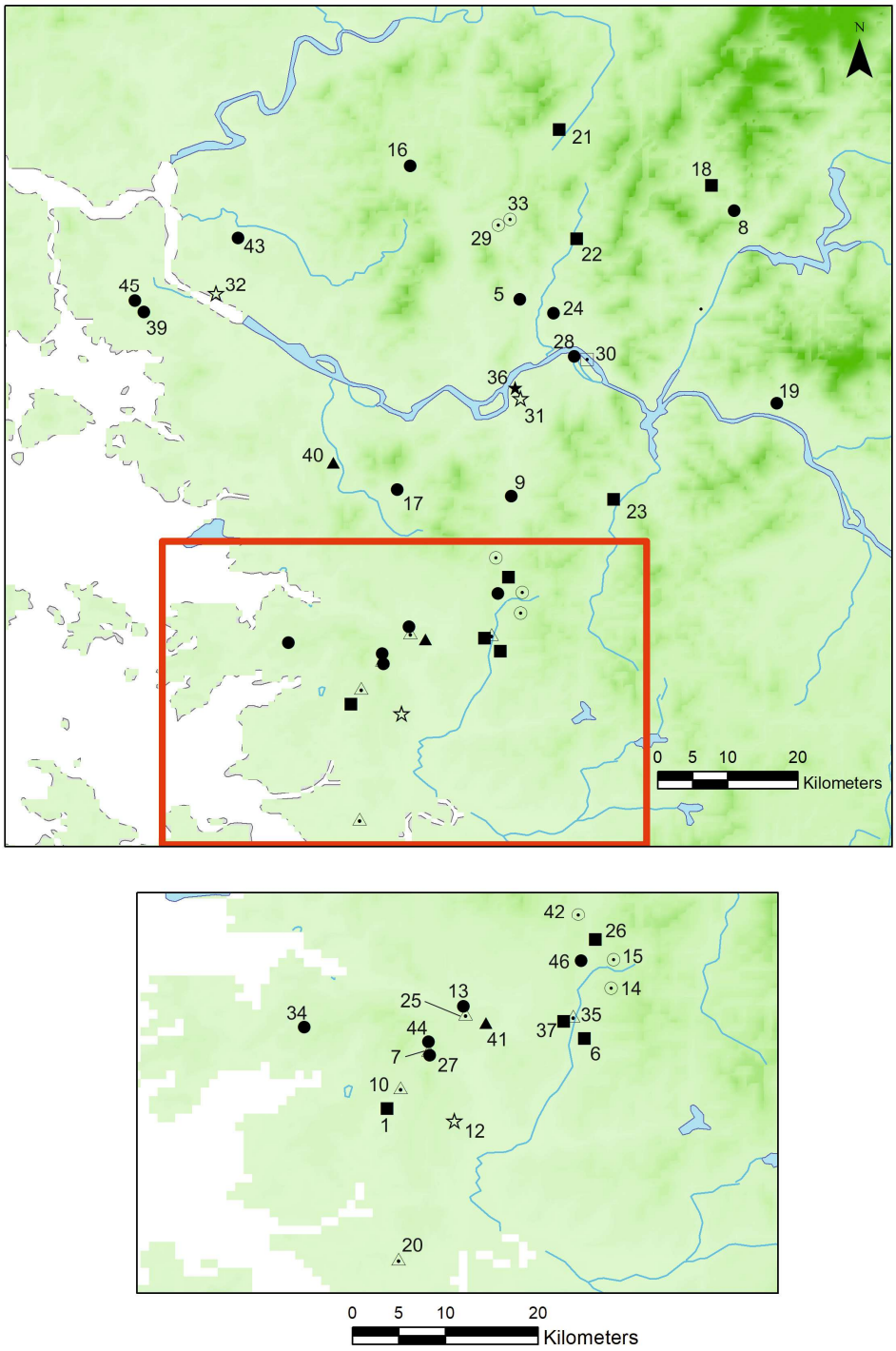


Figure 5-1: Map of Proto-Historic Early Baekje sites (250-400 AD) in the Han River basin and Hwaseong Region. Including fortresses (★), villages (■), hamlets (●), and production sites (▲); where hollow icons represent sites with no good-candidate radiocarbon dates (for site names see Table 5-1).

1. Balan-ri	17. Gwanyangdong	33. Nakyangdong
2. Balweonsan	18. Hangsa-ri	34. Namyangdong
3. Banweoldong	19. Highway 45	35. Nongseo-ri
4. Bojeong-ri	20. Hyeonhwa-ri	36. Pungnab
5. Byeollae	21. Jajak-ri	37. Seoku-ri
6. Cheonggye-ri	22. Janghyeon-ri	38. Seolbongsan
7. Dangha-ri	23. Jangjidong	39. Shindoshi
8. Deokhyeon-ri	24. Jigeumdong	40. Sohadong
9. Dongpangyo	25. Kiandong	41. Songsandong
10. Gajae-ri	26. Mabukdong	42. Suji
11. Geumnam-ri	27. Maha-ri	43. Wadong-ri
12. Gilseong-ri	28. Mangweoldong	44. Wanglim-ri
13. Gogeumsan	29. Minlakdong	45. Yangchon
14. Gongse-ri	30. Misa-ri	46. Yeongdeok-ri
15. Gugal-ri	31. Mongcheon	
16. Gwangseok-ri	32. Myeokjeolsan	

Table 5-1: List of sites appearing on maps in this chapter.

1). The latter area is situated at the mouth of a flatter land corridor connecting this area with the core Han River Basin (see Fig. 5-1). A stable ratio of hamlet to village sites is also evident, with 2.1 hamlets per village in the AD 250-400 period, similar to the 1.9 hamlets per village in the LIA (Table 5-2 for summary). The same can be said of production sites, with both Later Iron Age and Early Baekje periods having 0.8 production sites for every village site.

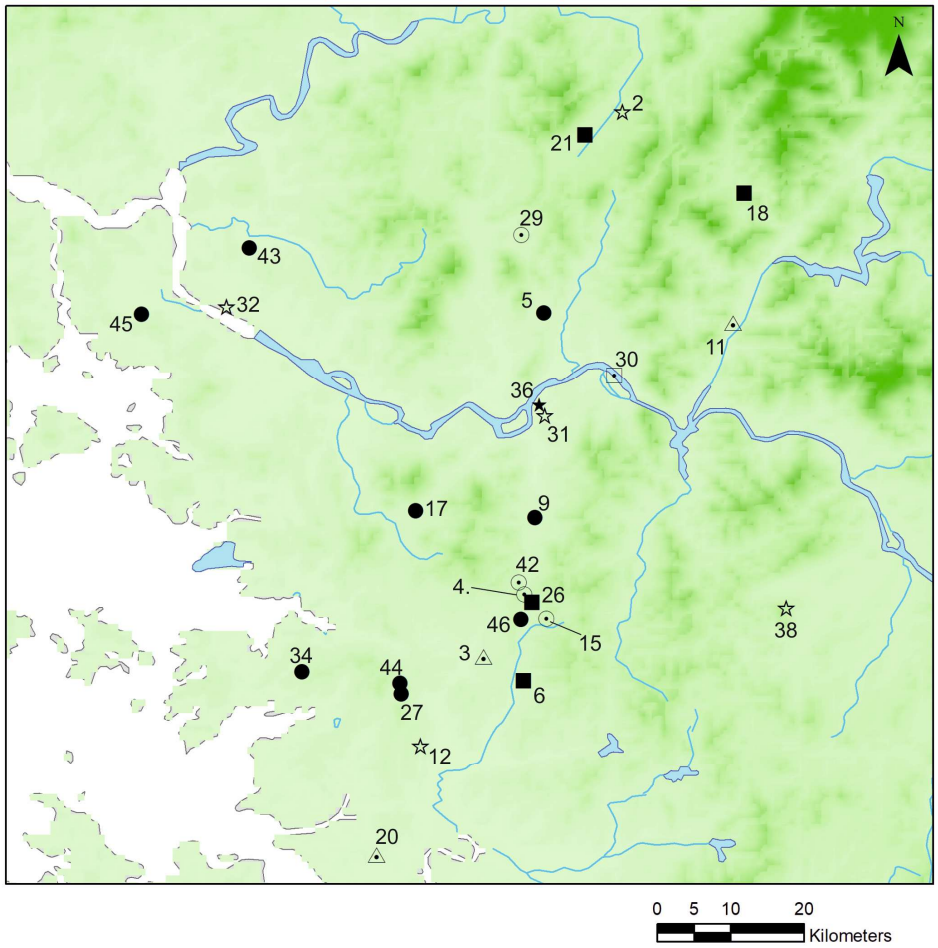


Figure 5-2: Historic Early Baekje period (post-400 AD) sites in the Han River basin and Hwaseong Region. Including fortresses (★), villages (■), hamlets (●), and production sites (▲); where hollow icons represent sites with no good-candidate radiocarbon dates (for site names see Table 5-1).

Significant differences can be identified in the regional occupation pattern for sites occupied after AD 400 (Fig. 5-2). For example, the total number of sites drops by almost 50%, creating a more dispersed pattern yet with a degree of nucleation within particular areas (also see Park et al, 2017). We also see relatively more hamlets (13 in total) and relatively fewer production sites (3 in total), with 2.6 hamlets per village and 0.6 production sites per village (with 5 village sites in total). The emergence of two mountain fortresses with stone walls is also a significant development (see below).

	Late Iron Age	Proto-Historic Early Baekje	Historic Early Baekje
Hamlet : Village	1.9	2.1	2.6
Production : Village	0.8	0.8	0.6

Table 5-2: Ratios of settlement types during each period under study.

Thus, a substantial social reorganization must have taken place during the later 4th century and into the 5th century. Some was likely due to the various conflicts Baekje is recorded to have had with Koguryo and Silla (most intensely the former). However the emergence of a more powerful central court and supporting bureaucracy, in part because of the aforementioned conflicts (see Ch. 7), are also likely to have influenced population dynamics and settlements distributions.

5-i-i: Compounds and Architectural Projects

The emergence of fortresses is one of the most visible changes seen in the Early Baekje period, and is a feature commonly pointed to as indicating the emergence of a state (e.g. Park, 2001a, 2010; Kwon, 2008). Such fortresses would have been major architectural projects, potentially requiring numbers of people and a level of organization an order of magnitude greater than anything seen during the LIA. However, inferring the building of a fortress to be

an expression of existing state power risks circularities in reasoning; assuming that states build fortresses and thus when we find fortresses there must exist a state is an obvious tautology (also see McIntosh, 2005: 15-16; Pauketat, 2007: 36-42). Equally, as noted by Barnes (2001: 154), assuming that a fortress site had a single stable function through time is unjustified, particularly as a polity capital; different roles and aspects of a fortress (e.g. defence, storage, status distinction) will be emphasized at different times (Sharples, 1991: 257; Harding, 2012: 27-8).

Furthermore, non-state societies, or communities acting outside of a state apparatus, have often undertaken large-scale and long term construction projects; there is no necessary link between such constructions and the state. During the British Iron Age fortifications were relatively common in certain regions, and constructed by various social forms, including complex chiefdoms (Hill, 1995: 72-4). Some could be very large and elaborate, such as Maiden Castle, where walls came to encompass over 400,000m^2 (Sharples, 1991: 63). Within and among many such hillforts (and non-fortified settlements) obvious social distinctions in terms of space or material culture are not evident until the end of the pre-Roman Iron Age (Haselgrove, 1999: 132; Harding, 2012: 285-90). Such forts were likely community centres with various communal functions rather than royal seats; even if there were some of social elite, emphases were community ritual, feasting, and possibly inter-community competition (Sharples, 1991: 259-61; Hill, 1995; van der Veens and Jones, 2006; Harding, 2012). Non-state societies may also organize the construction of large-scale ritual mounds and features throughout a landscape (Barrett, 1994; Bayliss et al, 2007; Pauketat, 2007), along with extensive irrigation systems (Fleuret, 1985; Ostrom, 1990: 69-79, 82-88).

The majority of this sub-section will discuss six identified fortresses as social and architectural projects. The four earthen fortresses are the primary focus because more data are

available and these four fortresses are more associated with the eventual formation of the Baekje state by the end of the 4th century AD. Other significant architectural projects such as the mid-late 4th century step tombs at Seokchondong are also discussed, while the general theme of domestic or other compounds in the study area is addressed in the latter segment.

Figure 5-3: Ariel view of Pungnab Fortress in 2006 (from NRICH, 2009: colour photo 1, p. vi).

Pungnab Earthen Fortress is the most intensively investigated fortress site of the Early Baekje period, with results published in 18 volumes thus far and more volumes to come (even though only 13% of the area has been excavated – see Kim et al 2016: 130). Ten metres to 13m high

walls built using compacted rammed or stamped earth run an estimated 3.5km, encircling an area of approximately 0.51km^2 (Park, 2010: 40) (Fig. 5-3). Within the walls there is evidence of domestic occupation, production and ritual activities more intense than anything seen in the previous period. This site's richness and open ritual space (see below), and its association with the later Mongchon Fortress and nearby monumental step tombs, makes it reasonable to assume that, at some point, the site made up part of the Baekje state's political centre (see Fig. 5-4).

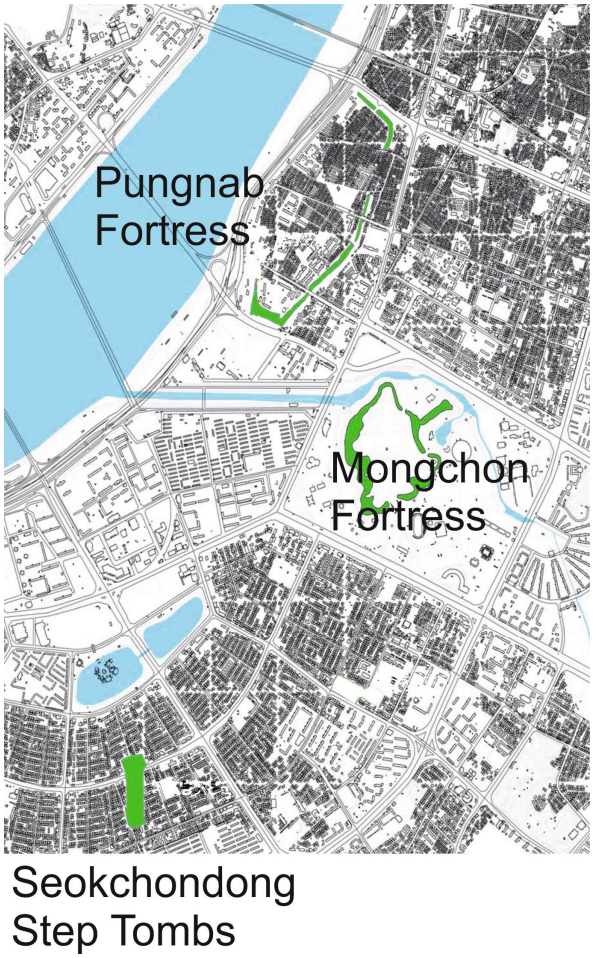


Figure 5-4: Key sites of the Early Baekje centre located adjacent to the Han River (modified from NRICH, 2007: Fig 1, p. 26).

Meticulous new work by the National Research Institute of Cultural Heritage (NRICH) and Seoul Baekje Museum (2014) using radiometric dates (AMS radiocarbon and OSL), detailed mapping of stratigraphic relationships, and mathematical modelling indicates that the fortress

walls were constructed in 4 distinct phases; (i) ground preparation, (ii) initial wall building, (iii) first extension, and (iv) second extension. Application of Bayesian statistics to combine the radiometric dates, tempered by the stratigraphic data, lead to a conclusion that the ground preparation phase started mid/late 3rd century-early 4th century, that the earliest wall was completed in the early/mid-4th century, that the first extension took place during the later 4th century, and that the second extension was added in the mid-5th century (NRICH, 2014: 214-221)[4]. Further, excavated tile fragments indicate that the earliest wall was not completed until at least the turn of the 4th century. One caveat is that these figures are based on just one section through the eastern wall; further investigations of the fortress walls may reveal a more complex picture.

O-Y. Kwon (2008), S-b. Park (2010: 47), and NRICH (2014: 247) estimate the fortress to have taken between 1 million and 1.38 million days of labour to have constructed. Both Kwon (2008) and Park (2010) use these figures to argue that a population of over 1 million people would have been needed to construct the walls, and thus a state must have organized the project. However such a supposition is erroneous, the figures simply mean that it would have taken that number people to build the fortress *in one day*. A more pressing issue though is that all three estimates are based on either the extant wall (Kwon, 2008; Park, 2010) or a model of the wall after the second extension (NRICH, 2014); i.e. the final form of the wall, not the first building phase as it was in the early/mid-4th century.

Park (2010) and NRICH (2014) both refer a section of the *Tong dian* 通典, a Chinese history of human institutions completed in AD 801 (Tang Dynasty 618-907 AD) (see Twitchett, 1992:

[4] Dates at 1ø: (i) AD 250-320, (ii) AD 310-370, (iii) AD 340-395, (iv) AD 375-460. *N.B.* only 1-sigma date ranges are given.

104-7), that states it would take 47 people 1 day to build an earthen wall made up of 24.1-26.1m^3 of soil[5] (thus one person can move 0.51-0.56m^3 of soil per day). I will use the same source and basic calculation to estimate the labour days required to build the first stage of the earthen wall, referring to the NRICH's (2014) model to estimate its likely volume (Fig. 5-5). Volumes here are given as a range because the Chinese unit used to express length (and therefore volume), the *chi* 尺, is variable through time and within professions. Three possible lengths may be identified during the Tang Dynasty (see Table 5-3).

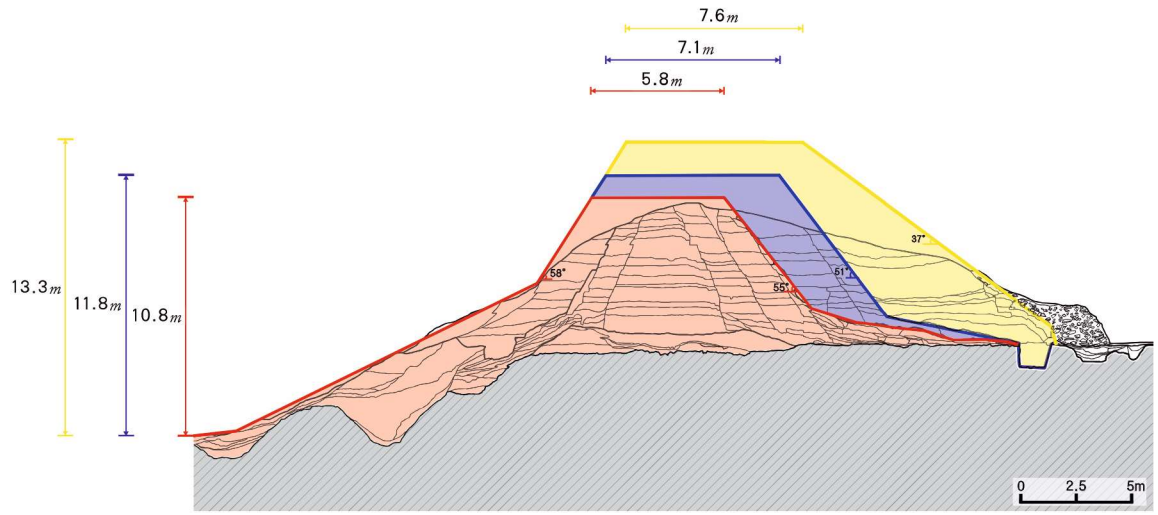


Figure 5-5: Model of Pungnab earthen wall phases; initial phase (red), first extension (blue), and second extension (yellow) (reproduced from NRICH, 2014: Fig. 110, p. 246).

Assuming, as the NRICH (2014) does, that the walls have a length of 3,500m, the volume of

[5] "積數得九十三丈七尺五寸 每一功 日築土二尺 計功約四十七人" (*Tong dian* quoted in NRICH, 2014: 228; Table 25). Thus the walls in this example are 937.5 cubic 尺 (see Table 5-3 for conversions).

the early/mid-4th century earthen wall was 438,812m^3. Table 5-3 presents my calculations of the total person days required to build such a wall, along with outlining a range of scenarios regarding the numbers of people that would have been required.

	if one 尺 is 29.5cm (Schinz, 1996: 421)	if one 尺 is 30cm (Qiu and Zhang, 2005: 115)	if one 尺 is 30.3cm (Qiu, 1992 in Wilkinson, 2000: 238)
total person days to build	857, 005.7	814,123.4	790,653.2
if 10,000 workers	85.7 days	81.4 days	79.1 days
to build in 100 days	8,571 people	8,141 people	7,907 people
to build in 1 full year	2,348 people	2,230 people	2,166 people
working 100 days/year for 5 years	1,714 people	1,628 people	1,581 people
working 100 days/year for 10 years	857 people	814 people	791 people
working 100 days/year for 20 years	429 people	407 people	395 people

Table 5-3: Labour cost calculations for various scenarios of building the initial phase of the Pungnab fortress wall.

Clearly it was possible for 8-10,000 workers to have built the walls within one season. However not only is there no evidence of LIA regional settlement of such a scale to support such a project, but, as discussed above, the walls appear to have taken a prolonged period of time to build. Considering that the economy at this time was largely agrarian it is also highly likely that surplus labour would have only been available for part of the year.

I argue instead that the initial earthen walls were built by a labour force of 800-1700 people working for a portion of each year over several years (if the project lasted more than a decade fewer people would have been required). Such numbers still represent a significant investment to gather, organize, and support, yet, as noted by Mizoguchi (2013: 239),

ethnographic evidence indicates that "it is possible to assemble a large-scale labour force [over 1000 people] with a relatively simple organization for fulfilling a communal obligation"; (relatively) grand scale architectural projects thus need not reflect an imposition of coercive or authoritarian power (see Chapter 7).

Estimates of Pungnab's population suggest that the wall construction project could have been carried out by just the residents of the site, or with some help from local villages. In other words, there is no need to envisage an elaborate or large scale labour mobilization drawing in people from across the region. In the three excavated zones with evidence of domestic occupation the average area per individual house was 565.2m^2 (ranging from one house per 481.6m^2 to one house per 720.9m^2). If this figure is assumed for the whole fortress area then approximately 902 households could have occupied Pungnab at any one time. At five people per household the population could have been as many as 4,510 people, more than enough to have undertaken the wall construction (see Table 5-3).

Complicating the picture however is the existence of the ritual space, which accounts for around 16% of the excavated areas. However even taking this situation into account by assuming such an area is representative of the average space within the fortress was given over to non-residential use (which, admittedly, is difficult to assume but there is little other choice here), the population remains large enough to have undertaken the project on its own. A revised figure indicates 758 houses might have stood at any one time, giving a population of around 3790 people.

The other three fortress sites with earthen walls were not built from scratch on an alluvial plain like Pungnab, but followed and accentuated natural ridges in the landscape. Two of these sites also appear to date from the later 3rd or early 4th century; Myeokjeolsan Fortress on

the Han River in the western part of the study area, and Gilseong-ri Fortress on the southern Hwaseong plain. The method of construction makes an estimation of labour power difficult, as each wall section may vary widely with differences in topography. The lack of detailed chronology also limits any proposals regarding how long the projects may have taken and thus the possible organization of labour. Two things that can be said however are, (i) site occupations were contemporaneous with the walled Pungnab Fortress site, and (ii) the numbers of people involved was likely to have been significantly fewer due to much shorter walls (300m only for Myeokljeolsan, and 2,311m for Gilseong-ri) and less building material being needed overall thanks to the incorporation of natural ridges.

The builders of both these fortresses appear to have employed the rammed or stamped earth method of construction, like those at Pungnab (some may well have been the same people - see Chapter 7). The walls at Gilseong-ri however also show evidence that earth blocks, clay blocks *and* clay bricks were also used (Hanshin University Museum/Hwaseong Cultural Center, 2010: 37-40). Such features suggest improvisation or the blending of traditions on the part of the builders, or even the presence of multiple knowledge bases coming together at this one point. Yet, with only around 2.6% of the site investigated, further investigations are needed to clarify this issue.

The final earthen walled site is Mongchon Earthen Fortress, located around 1.5km to the south of Pungnab Fortress (Fig. 5-4), where 2,285m long walls enclosed an area of 0.22km^2. The chronology of the site is relatively vague because the bulk of excavation work, carried out in the 1980s, left a many stratigraphic relationships unclear (Kwon, 2008). Still, the material assemblage indicates activity during the late 4th century, while the bulk of diagnostic Chinese ceramics indicate the most intense occupation was during the 5th century (Park, 2010: 123-4). The fortress is therefore likely to have been built at around the same time, or just after,

the first extension of the walls at Pungnab. The builders of Mongchon used similar methods to those of other sites (stamped/rammed earth in a stepwise fashion following the natural topography); wooden posts that had appeared to be a palisade wall are more likely to have been structural support for the piling of earth (Seoul Baekje Museum, 2014).

Completing the monumental projects in the Baekje centre are the step and stone chamber tombs at Seokchondong, around 3km to the southwest of Pungnab Fortress (Fig. 5-4). What remains of the largest step tomb (by far) is a base of earth and variably sized cobbles in a 50m x 50m square that was possibly more than 6m high (see S. Yi et al, 2013: 75-77). The cobbles at the core of the structure appear carefully selected for their shape, yet were unworked, while the façade was made using cut and shaped rock.

These tombs, dating to the mid-late 4th century (Park, 2001a: 32, 167; 2007: 159; 2010: 68-77), were clearly significant social and material investments on behalf of significant persons or factions that involved advance planning. Similarity to the Goguryo elite's tombs has also been noted (Best, 2006: 97-99; Park, 2001a, 2010; Barnes, 2015: 335-6), although the resemblance is only skin-deep, with the construction processes and internal layout differing significantly (Park, 2001a: 29). Despite the obvious social significance of these monuments however, the level of investment is considerably lower than for the various fortresses built during the Early Baekje Period. Significant individuals were being honoured, but the bulk of Baekje's labour investment was into fortress walls, possibly more collectively focused projects.

According to H. Kim (2018: 7), in Gyeonggi Province (covered by most of the study area) there are over 200 stone-walled fortresses dating from Early Baekje through to the Unified Silla period (i.e. c. AD 250-935). Most such fortresses are simply labelled as dating to the

Three Kingdoms Period, with the identity of the builders obscure (Kim, 2018). Fortresses were also often occupied by multiple political actors through time (e.g. see Choi et al, 2017).

Because of this ambiguity only two such fortresses are highlighted in this study[6], Seolbongsan and Balweonsan Fortresses. Both are situated on low hills (250-300m above sea level), each with walls of shaped stone around 1,000m in length; significantly different landscape contexts than the earthen walled fortresses on plains (whose natural ridges only rose 25-50m a.s.l.). Such constructions clearly represent further significant investments in fortresses and the activities of more highly skilled workers in both masonry-work and civil engineering. The change in landscape context also indicates a change in role for the stone-walled fortresses, being both more visible and giving greater visibility over the local area. However, as discussed below, there remains an apparent constancy in certain social activities regarding feasting, with public communal food consumption being concentrated within these stone-walled fortresses.

Despite the appearance of large scale architectural projects, the lack of clear internal compounds is an important feature of sites that carries over from the LIA (although fortresses themselves may of course be seen as very large 'compounds'). On all site types evidence such as boundary ditches, rows of post holes indicating fences, or drystone walls are absent, giving the impression that even large fortresses were open in plan. Inter-visibility would therefore still have been high, and even though there is evidence of roads or trackways within some areas of Pungnab Fortress, no material barriers are in evidence within the fortress.

[6] There are several other possible Early Baekje stone-walled fortresses in the study area, however none have been excavated, only surveyed using field-walking. These examples are therefore not included here.

Residents on any site were therefore not prevented from being able to take a multitude of pathways through any settlement.

Relevant here is Blanton and Fargher's (2016: 165-6, 181-5) discussion of how less autocratic and more collective polities tend to have settlement layouts that promote high levels of interaction and facilitate communication. Such layouts allow high numbers of potential routes to any destination. These issues will be discussed in further detail in Chapter 7, but, despite some very clear shifts in social organization, important attributes of the heterarchical LIA social structure remain salient.

5-i-ii: Status-Reputational Symbols

Over the course of the Early Baekje Period, significant changes occurred in the distributions of status-reputational symbols on the regional scale. Rather than having multiple sites with general parity or only graded distinctions, as in the Late Iron Age, a more-or-less bi-polar pattern emerged (Fig. 5-6). This pattern is rooted in the activities of those sites emerging after 250 AD (see Fig. 5-6ii), and remains into the period after 400 AD.

People living in specific geographical areas began to sequester probable status signifiers such as glass or jade beads and imported styles of pottery (see Ch. 4-i-i-ii), almost exclusively. These items were accumulated by particular residents of the central fortresses of Pungnab and Mongchon, and certain people from sites around Yongin (Seoku-ri, Mabukdong and Suji), situated at the entrance to the Hwaseong plain (an area that of central importance to the ceramic analysis in Chapter 6). During this period therefore, access to such goods clearly became more restricted to certain types of person, with people outside of these nodes (mostly dwelling in smaller hamlets) unable to participate in exchange networks granting symbols of authority. In other words, certain actors appear to have successfully monopolized symbols of

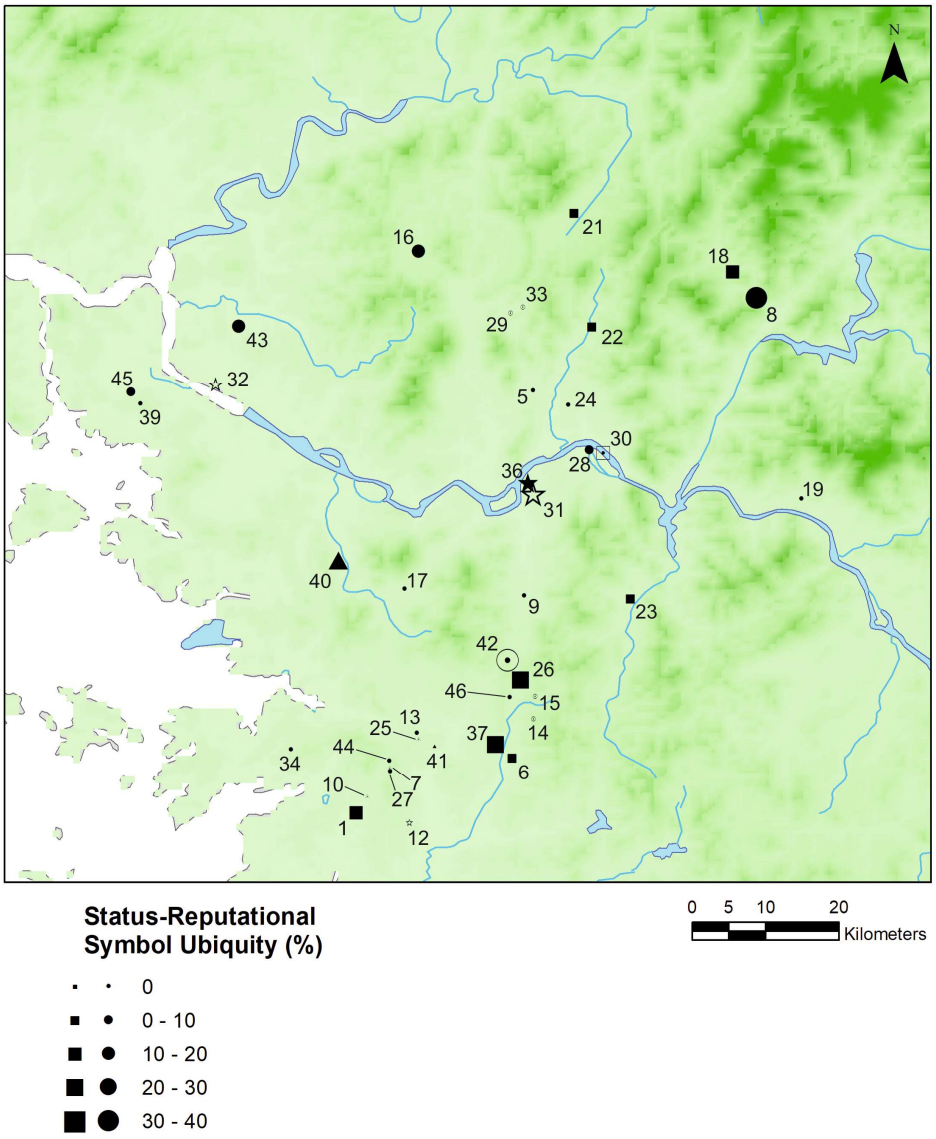


Figure 5-6i: Status-Reputational symbol ubiquity scores for all Early Baekje sites (250-400 AD).

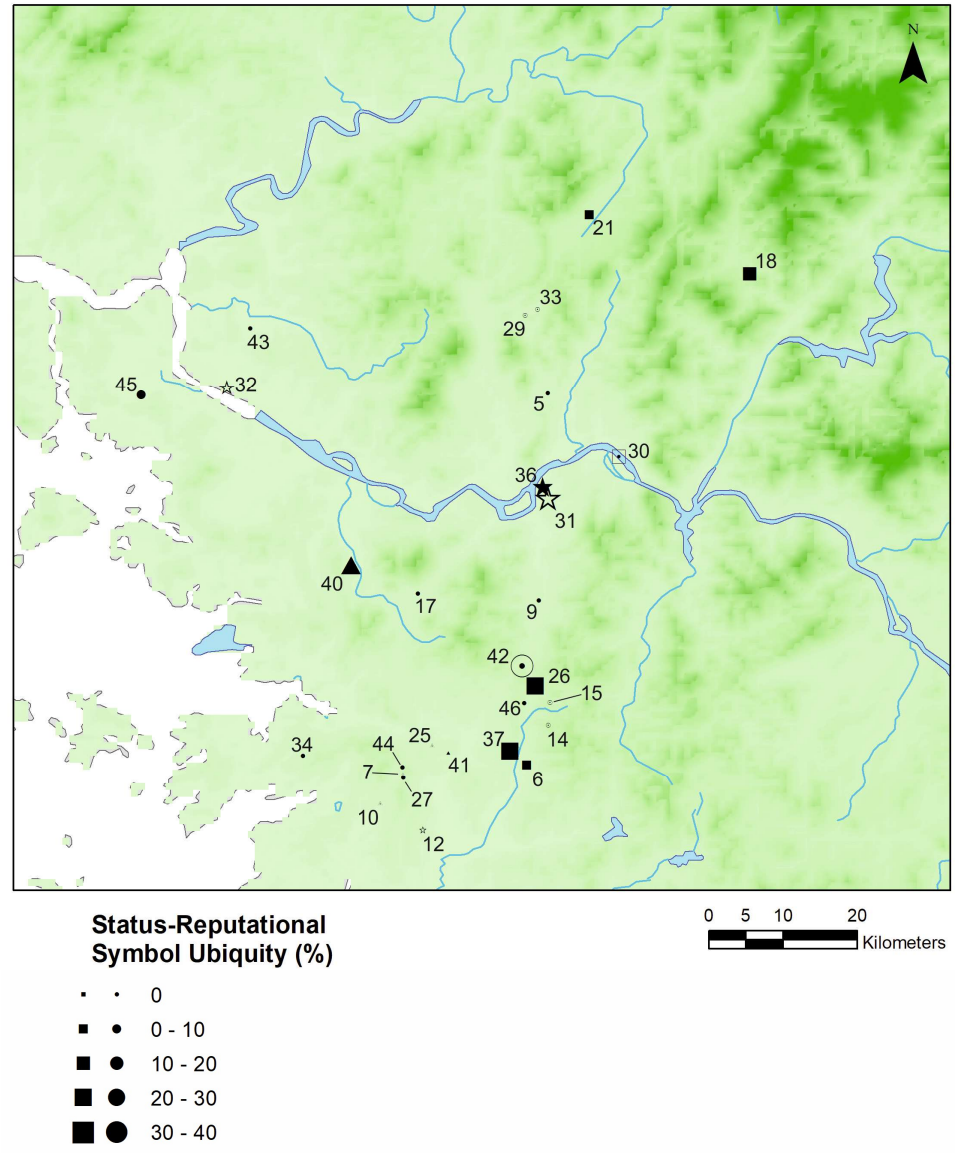


Figure 5-6ii: Status-Reputational symbol ubiquity scores for Early Baekje sites (250-400 AD) where LIA transitional sites have been removed.

authority. Chapter 7 discusses the processes allowing for such monopolization in depth.

On the individual settlement level too there are indications at various sites that residents of specific housing clusters were beginning to monopolize access to status signifiers. Monocentric distribution patterns of such items came to dominate on certain sites that emerged in the Early Baekje Period (Table 5-4). Yet the larger village sites of Mabukdong, Seoku-ri, and Jajak-ri maintained less centralized access to status signifiers. All three have two focal household clusters centres, and thus resembled LIA sites in this regard (Fig. 5-7).

Site (site number)	Site Type	No. Domestic Contexts	Ubiquity (status signifiers)	Spatial Distribution
Mongchon (31)	Fortress	10	50.0	scattered
Suji (42)	Hamlet	6	33.3	monocentric
Pungnab (36)	Fortress	53	30.2	monocentric
Seoku-ri (37)	Village	19	26.3	multicentric
Mabukdong (26)	Village	72	20.8	multicentric
Myeokjeolsan (32)	Fortress	8	12.5	monocentric
Jajak-ri (21)	Village	30	6.7	multicentric
Yangchon (45)	Hamlet(s)[7]	33	3.0	singular
Cheonggye-ri (6)	Village	117	0.8	singular

Table 5-4: Ubiquity scores and site level distributions of status-reputational symbols in Early Baekje (250-400 AD) settlements (site number correlates with Table 5-1); sites in italics have no clear radiocarbon date.

The distribution of status signifiers at Pungnab Fortress may also be seen as multicentric if non-domestic pit and ditch contexts are taken into account. This issue will be discussed in more detail in the latter part of this chapter, but at Pungnab there is an open space with a

[7] At this time Yangchon hamlet consisted of a series of small clusters spread across the slope and base of a low hill.

series of pits and structures containing imported pottery styles, food serving vessels, and ceramic jars with intentionally broken rims (also see section 5-ii). Within Pungnab then, status signifiers were spread between this probable ritual space (see 5-i-iii) and one residential district. Within the ritual space structured deposition of such valuable items into a multitude of smaller pits may have all been carried out by residents of the prominent domestic district, but such a scenario seems unlikely. Other people or nodes of authority within Pungnab are likely, and even within the district where status goods were concentrated multiple independent households were able to procure such items (see Ch. 7).

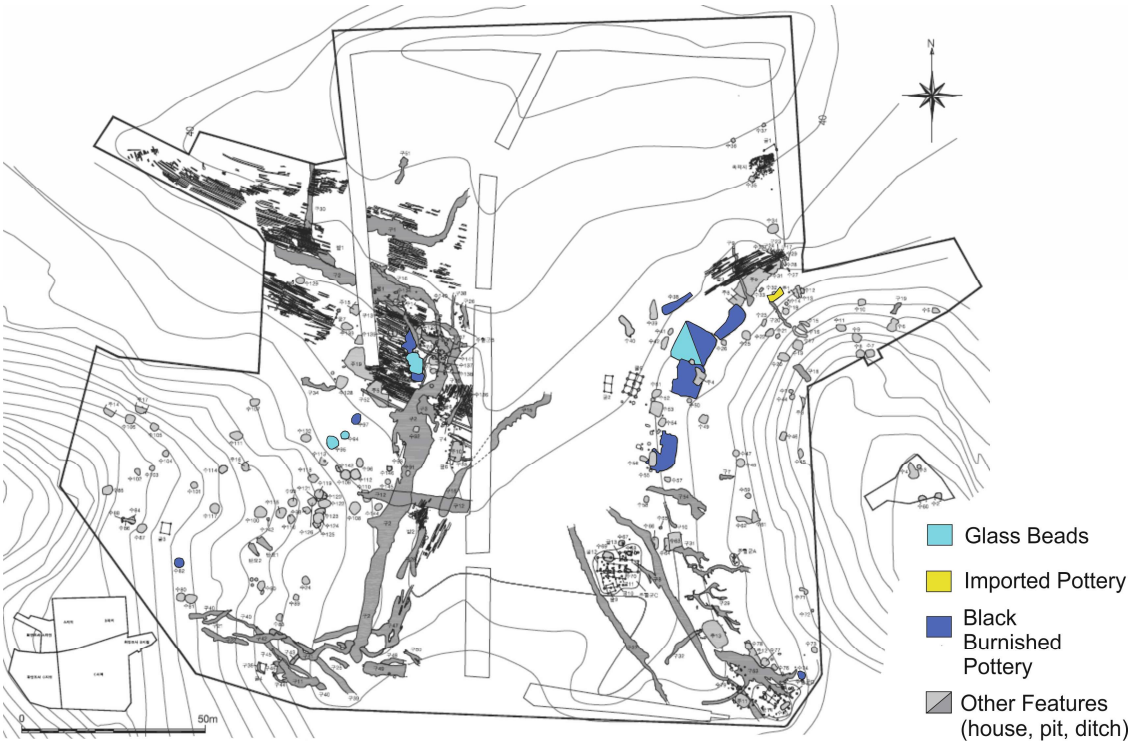


Figure 5-7: Distribution of status-reputational symbols at Seoku-ri in Yongin (modified from Gyeonggi Cultural Foundation, 2007b: Fig. 6, p. 33); N.B. black stripes to the northeast and northwest are very thin furrows, indicating cultivation activity

Sites occupied after AD 400 essentially show the same pattern. Status-reputational symbols remained concentrated in the central fortresses or sites at Yongin. Yet, as covered by Table 5-2, multicentric distributions on the site level also persist. Activities at the open space of Pungnab Fortress continued (although in a different form - see next subsection; Ch. 7), and therefore so does the somewhat multicentric nature of the status signifying items' distribution.

5-i-iii: Meeting and Eating

Just as residents in certain settlements were more-or-less monopolizing status signifiers, Figure 5-8 highlights the new importance of particular villages in the Yongin area after AD 250. Both Seoku-ri and Mabukdong show a high relative prevalence of serving vessels, indicating new intensities of feasting activity within these villages. The various other hamlets and villages throughout the region appear to have had relative parity in the intensity of communal food consumption. A survey of funerary evidence may reveal a different pattern of deposition however; communities in other parts of the region may have disproportionately deposited serving vessels (and status signifiers) in funerary or other contexts. That work is beyond the scope of the present study, but must be followed up in future.

Some exceptions are the three hamlet sites in the west, replicating the multicentric pattern of the LIA. Wadong-ri in particular had an elevated numbers of serving ceramics. As noted previously, Wadong-ri was a possible ceremonial centre and locale for public food consumption. In addition, a pottery production site[8] emerged during the Early Baekje Period around 1.1km northwest of the main settlement. A waste scatter containing a significant proportion of serving vessels was uncovered here, further inflating the number of serving vessels at the site. Whether these kilns were producing serving vessels for only the main

[8] Two kilns and an associated artefact scatter.

hamlet or also for people in the wider area cannot be assessed here; but either way, feasting appears to have remained an important activity in this part of the region.

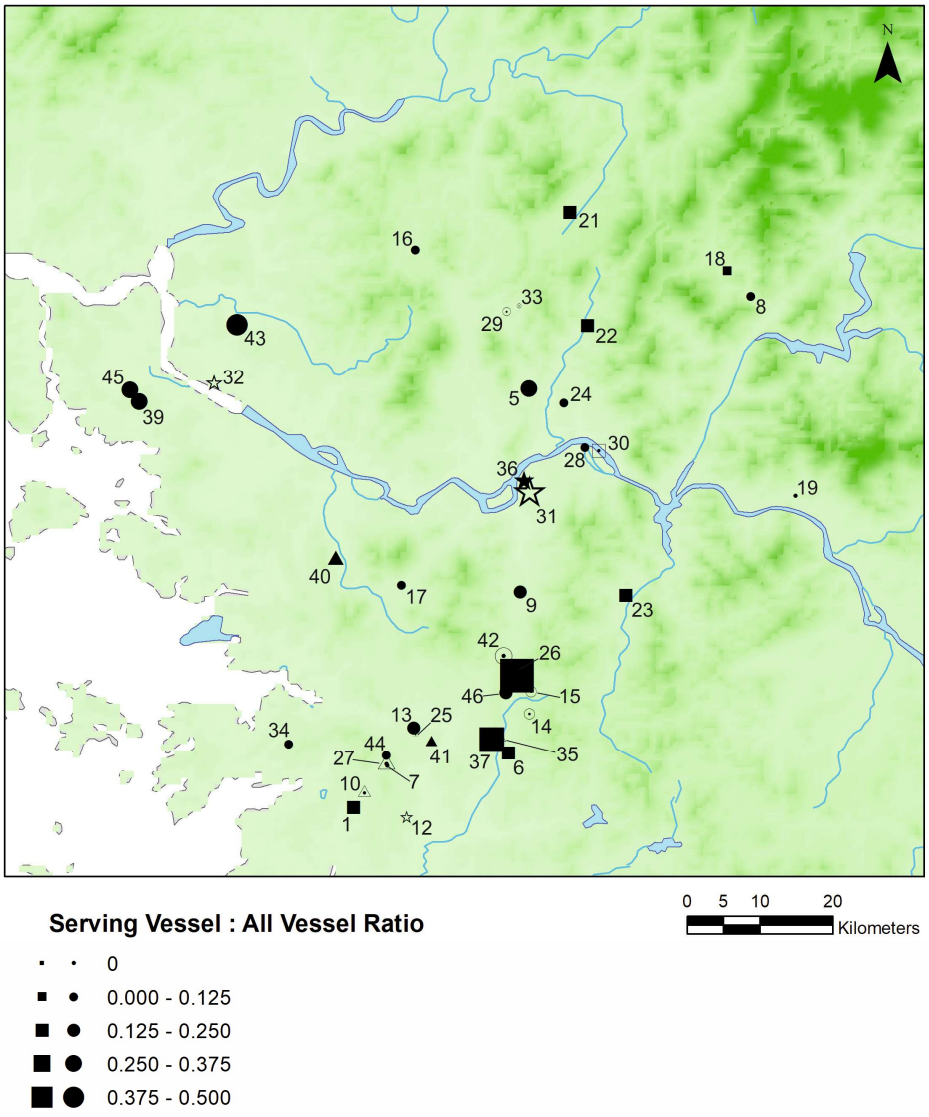


Figure 5-8: Serving vessel-to-all other vessel ratios on Early Baekje settlement sites (250-400 AD)

In terms of all types of serving vessel the intensity of communal food consumption at the central fortresses does not appear to have been so distinct from other sites in the wider region

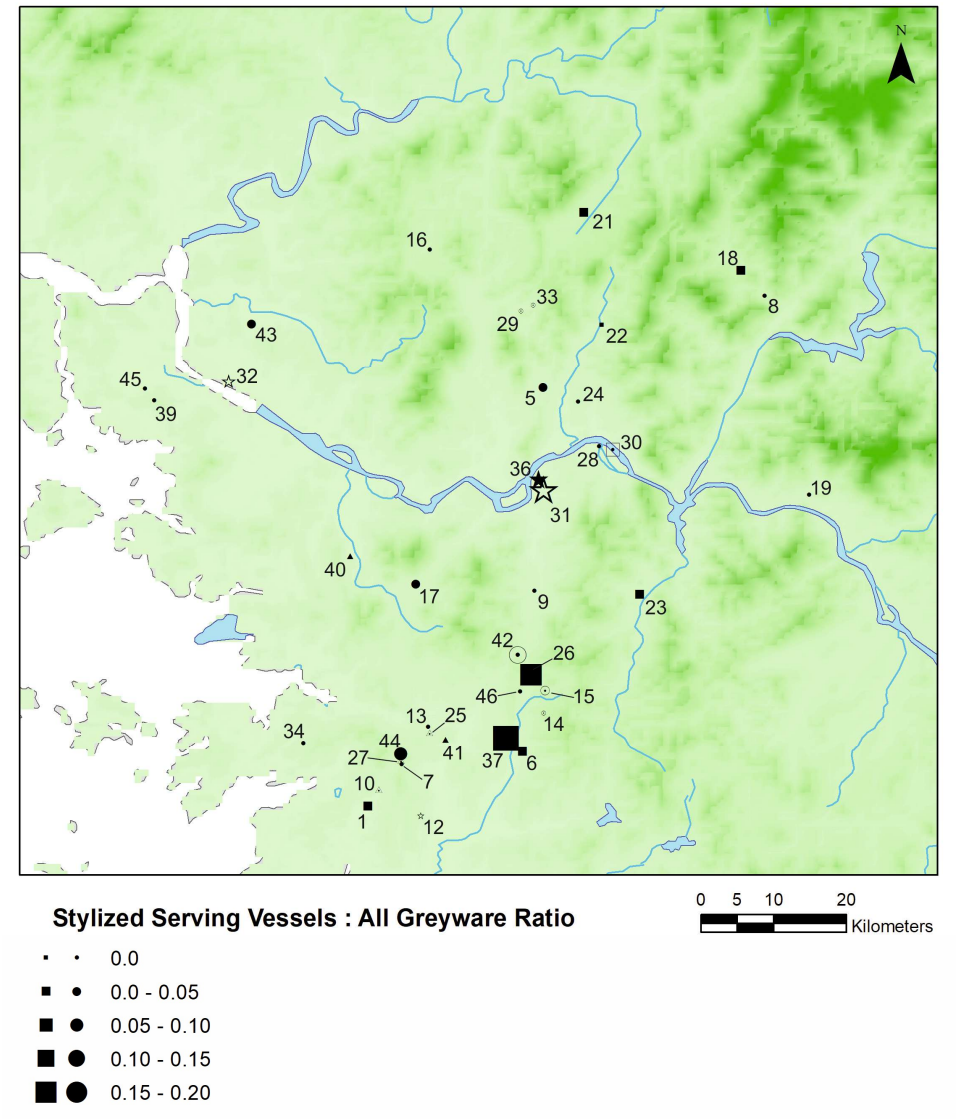


Figure 5-9: Import-style and stylized serving vessels-to-all greyware ratios on Early Baekje (250-400 AD) settlement sites.

Figure 5-10: Examples of the stylized serving ceramic set (not to scale); (i) footed dish from Pungnab fortress (from NRICH, 2012a: artefact photo 90-961, p. 649) (ii) tripod dish from Pungnab fortress (from NRICH, 2012a: artefact photo 122-1278, p. 681) (iii) footed dish from Seoku-ri (from Gyeonggi Cultural Foundation, 2007b: photograph 92-4, p. 110) (iv) footed dish from Seoku-ri (from Gyeonggi Cultural Foundation, 2007b: photograph 92-1, p. 110) (v) tripod bowl/pot from Seoku-ri (from Gyeonggi Cultural Foundation, 2007b: photograph 69-7, p. 87) (vi) pot stand from Pungnab fortress (from NRICH, 2012a: artefact photo 109-1169, p. 668).

(i.e. at Yongin and in the western area - see Fig. 5-8). However these fortresses' centrality in a certain form of regional feasting culture is highlighted by the distribution of stylized-serving and import-style ceramics (Fig. 5-9). Forms such as tripod plates and bowls or footed bowls are clearly of a different order from plainer serving vessels (Fig. 5-10), and their concentration within two specific areas (Pungnab-Mongchon and Yongin) indicates that the use of such vessels was restricted to specific settings or activities.

Again then, certain people or households within the central fortresses and Yongin villages had effectively monopolized access to stylized and import-style pottery, in addition to the activities where such items were used. Several authors note that the forms of certain serving vessels (tripods and footed bowls in particular) appear to have been adapted from forms used in Chinese feasting culture, specifically during the Jin Dynasty (Park, 1992: 25-9; Jung 2015: 71-5; Kim et al, 2016). A supposition that such vessels were used in communal food consumption is thus a fair one (although of course they will have become adapted to local conditions). In any case, two centres may be identified; centres where novel and highly meaningful practices relating to food presentation and (probable) consumption was taking place.

The concentration of serving vessels and other items within a small number of sites could be seen as indicative of larger scale diacritical feasting (Hayden, 1996, 2001, 2014; Dietler, 2001 – Ch. 2-iii-i), but at those 'central' sites the scale of feasting events appears to have been small, and with multiple hosts throughout space and time. Of the 16 sites that emerged into the Protohistoric Early Baekje Period ten had serving vessels distributed in multicentric (n = 5, 31.3%) or scattered (n = 5, 31.3%) patterns, five had a monocentric distribution (n = 5, 31.3%), while one site had only a single serving vessel (Table 5-5). Fortresses and villages tended to have multicentric or scattered distributions, and, unlike on the overwhelming

majority of LIA sites, concentrations of serving vessels did not necessarily correlate with specific housing clusters. At Pungnab, Mongchon, and Seoku-ri some clusters focused within domestic contexts while others were in pits (or artificial ponds in the case of Mongchon) away from the living spaces. No hamlet site has a multicentric distribution, all having monocentric or scattered concentrations of vessels, with five out of eight showing evidence of a central structure or cluster.

Site (site number)	Site Type	Serving Vessel Distribution	No. Serving Vessels	% Serving Vessels in House Contexts	% Serving Vessels in Other Contexts
Pungnab (36)	Fortress	multicentric	1099	15.1	84.9
Mongchon (31)	Fortress	scattered	638	18.7	81.3
Mabukdong (26)	Village	multicentric	438	50.7	49.3
Seoku-ri (37)	Village	multicentric	141	40.4	59.6
Cheonggye-ri (6)	Village	scattered	77	53.2	46.8
Jajak-ri (21)	Village	multicentric	71	64.8	35.2
Myeokjeolsan (32)	Fortress	monocentric	43	27.9	72.1
Suji (42)	Hamlet	monocentric	33	33.3	66.7
Yangchon (45)	Hamlet	monocentric	21	90.5	9.5
Gilseong-ri (12)	Fortress	multicentric	20	65.0	35.0
Dongpangyo (9)	Hamlet	monocentric	15	53.3	46.7
Wanglim-ri (44)	Hamlet	scattered	11	36.4	63.6
Byeollae (5)	Hamlet	monocentric	10	70.0	30.0
Gwanyangdong (17)	Hamlet	scattered	4	75.0	25.0
Namyangdong (34)	Hamlet	scattered	2	50.0	50.0
Minlakdong (29)	Hamlet	singular	1	100	0

Table 5-5: Site level distributions of serving vessels on Early Baekje (250-400 AD) sites and the contexts they are found within (transitional sites excluded; see Chapter 4 – site number correlates with Table 5-1); sites in italics have no clear radiocarbon dates.

During the Protohistoric Early Baekje period smaller settlements therefore appear to have coalesced around a single dominant household, whereas in larger villages and fortresses multiple autonomous households co-existed. In the latter case, not only were multiple

households staging feasts but specific areas were also set aside for public communal activities, particularly within the two central fortresses. Still, most feasting activity remained in and around household clusters before around AD 400, presumably sponsored by autonomous household heads (see latter sub-section and Chapter 7). These activities take the character of alliance-making or self/clan empowerment feasts outlined by Dietler (2001) and Hayden (2001), similar to those seen during central Korea's LIA (see Ch. 4).

Site (site number)	Site Type	Serving Vessel Distribution	No. Serving Vessels	% Stylized Vessels in House Contexts	% Stylized Vessels in Other Contexts
Pungnab (36)	Fortress	multicentric	473	14.0	86.0
Mongchon (31)	Fortress	Scattered	412	20.4	79.6
Mabukdong (26)	Village	multicentric	155	49.7	50.3
Seoku-ri (37)	Village	multicentric	74	31.1	68.9
Suji (42)	Hamlet	monocentric	18	5.6	94.4
Myeokjeolsan (32)	Fortress	monocentric	14	50.0	50.0
Jajak-ri (21)	Village	monocentric	8	75.0	25.0
Wanglim-ri (44)	Hamlet	Scattered	6	0	100
Byollae (5)	Hamlet	Scattered	2	0	100
Cheonggye-ri (6)	Village	Singular	1	100	0
Gwanyangdong (17)	Hamlet	Singular	1	100	0
Misa-ri (30)	Village	Scattered	26	53.8	46.2
Balan-ri (1)	Village	Scattered	15	46.7	53.3
Wadong-ri (43)	Hamlet	Scattered	12	16.7	83.3
Hangsa-ri (18)	Village	multicentric	5	80.0	20.0
Jangjidong (23)	Village	monocentic	2	50.0	50.0

Table 5-6: Site level distributions of import-style and stylized serving vessels (combined) on Protohistoric Early Baekje (250-400 AD) sites and the contexts they are found within (site number correlates with Table 5-1); transitional sites from the LIA are included below the hashed line. Sites in italics have no clear radiocarbon dates.

Site level distributions of import-style and stylized serving vessels broadly follow those described for the more general serving vessel assemblage (Table 5-6), again underlining the

presence of multiple loci of authority within larger settlements. Pungnab, Mongchon, and Seoku-ri have high concentrations of such vessels in particular domestic structures and pit clusters, while at Mabukdong stylized serving vessel distribution is associated with specific housing clusters only. Relevant transitional sites, which were not considered on this aspect in the previous chapter (for reasons outlined there), show scattered or multicentric patterns (see Table 5-6), as with their distributions of serving vessels in general.

Three broad site types may therefore be proposed, signaling a significant change to certain sites' organization, the activities occurring there, and likely relations among the residents of different settlements. The first type includes those fortress and village sites where novel activities that involved public food consumption and/or ceremonial presentation of food took place, resulting in the deposition of relatively large amounts of vessels in specific spaces (usually within pits) situated away from domestic structures. Settlements where the majority of serving vessels were found in non-domestic contexts neatly maps onto this type of site (see Tables 5-5, 5-6).

The second type of settlement includes villages like Mabukdong or Jajak-ri (and Cheonggye-ri, to an extent), village sites that retain the character of LIA sites. In such villages food consumption activities remained focused in and around two or more household clusters. Thus, although more non-domestic deposition was occurring relative to the LIA, feasting remained household-centric, missing the public ceremony seen at other villages and fortresses.

The third type of site is the hamlet, where consumption activities generally focused around specific single domestic structures or clusters. Superficially, on the metrics considered here, this pattern also resembles that for many LIA hamlets. However, the nature of Early Baekje hamlets is different, now consisting of multiple smaller clusters spread across a wider area

(hillsides and/or flatland at the base of low hills), such as at Yangchon or Dongpangyo. Thus, whereas before hamlets were made up of one or two closely situated autonomous housing groups, in Early Baekje hamlets had multiple households spread widely with one household only being a place for feasting (also storage – see below).

Considering the sheer volume of serving ceramics concentrated within them (see Tables 5-3, 5-4), the centrality of the two fortresses on the lower Han River and particular villages in the Yongin area is further underlined. The clustering of feasting centres into two narrow geographical areas indicates that, as with status signifiers, specific actors had come to dominate another key arena of social activity. Pungnab and Mongchon alone held 66.2% of all serving vessels and 72.3% of all the import-style and stylized serving vessels in the study area. Further, five key sites (Pungnab, Mongchon, Mabukdong, Seoku-ri, Suji) contained 89.5% of all serving vessels and 92.5% of import-style and stylized vessels. In the LIA nine sites carried almost 95% of serving vessels, however these sites were distributed independently of one another throughout the study area.

Post-AD 400 the same two areas still dominate as places of meeting and eating, now characterized primarily by the fortress complex of Pungnab-Mongchon and the Mabukdong site. One notable development is that the newly constructed mountain fortresses in the north (Banweolsan) and west (Seolbongsan) of the study area also appear to be sites where serving vessels were relatively concentrated. Banweolsan in particular has the highest ratio of serving vessels of all studied sites, with 1.3 serving vessels for 1 of every other type. For comparison, the figure for Pungnab during this period is 0.51; with 0.79 for Mongchon and 0.89 for Mabukdong. Both fortresses also have relative concentrations of import-style or stylized

serving vessels on par with Pungnab and Mabukdong[9].

Such mountain fortresses were therefore likely more than simply military bases. They were also active spaces for the kinds of practices occurring in the central settlements (also noted by Han, 2014). Their locations, on mountain-tops, gave their occupants wide visibility across the landscape, and the fortresses would have been visible from the surrounding lower land and valley transport routes. The construction of imposing stone-walled fortresses able to monitor more peripheral regions signals a shift in the relations between the Baekje leadership within Pungnab-Mongchon and local leaders and communities. Whether these forts were occupied by local leaders or by officials dispatched from the Baekje political centre is hard to know at this stage, but they were regional outposts of key Baekje cultural practices. The possible implications of these changes regarding Baekje political organization and social authority will be discussed in detail in Chapter 7-ii-iii.

The period of AD 250-400 also saw the emergence of more formalized meeting places, some being structures and others being open spaces regularly used for gatherings and ritual practice (although the spaces themselves remained seemingly unbounded and unpaved). Such spaces are most obvious in the two central fortress sites of Pungnab and Mongchon. Pungnab has both an open space and structures, although the "ritual space (慶堂地 Kr: *gyeongdang-ji*)" at the heart of the fortress has received most attention. Multiple important archaeological features have been uncovered within the ritual space, including a structure that Kwon (2008: 77-8) has argued resembles shrines found in Japan[10], a walled and roofed pit-structure

[9] Pungnab, 0.16; Mabukdong, 0.17; Banweolsan, 0.15; Seolbongsan, 0.12

[10] Kwon (2008) argues that the plan of this proposed shrine, in the shape of the Chinese character '呂' with two square structures joined by a low footbridge, resembles examples from Japan.

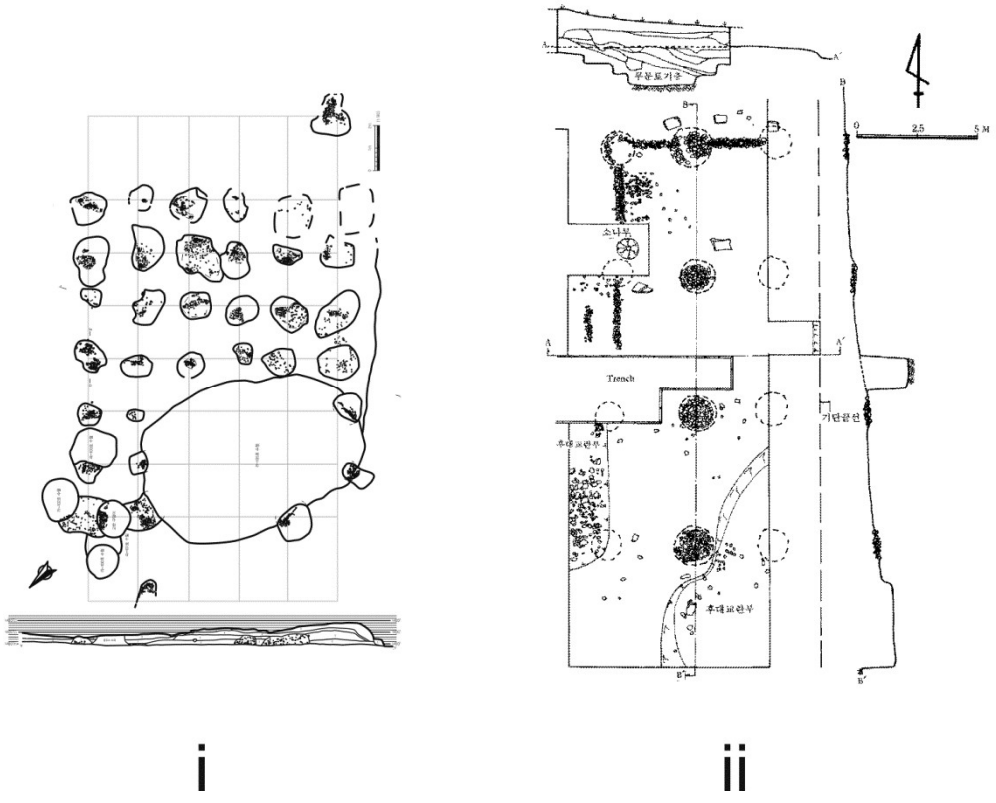
storehouse containing 30 large jars imported from Jin China[11], and over 200 pits (and a well). These pits contained huge amounts of status signifiers and serving vessels (the majority of which remain unpublished), while fish bones (red seabream, *Pagrus major*) were discovered in some of the Chinese jars.

Pit 9 in particular, from the stratigraphically latest phase and dated to the mid/late 5th century (O-Y. Kwon et al, 2004), held over 55% of all the site's serving vessels and 66% of all import-style and stylized serving ceramics for the post-AD 400 period (plus great numbers of horse, cow, wild boar, and fish bones). Activities within the ritual space will be discussed further below and in Chapter 7, but the space was clearly a setting for large gatherings, ceremony, and communal food consumption, particularly in the 5th century.

Pungnab and Mongchon also each had (at least) one large pavilion or platform, each with an area over 100m^2 (Fig. 5-11). Neither was associated with any ritual space. In the case of Pungnab the structure was situated in an area of intense and long term domestic activity near the western wall. The structure's function as a pavilion or meeting house is somewhat speculative, the excavators suggest it was a "storage facility for the royal family's treasures (Kr: 왕실의 보물을 보관하던 창고시설)" due to a claimed similar form with treasure houses from Nara in Japan (NRICH, 2012b: 496); but there is no material evidence for a firm conclusion either way. At Mongchon fortress a platform/pavilion was situated next to an artificial pond near the mid-west wall. This pond contained a significant concentration of serving and stylized serving vessels (13% and 16% of the respective site totals), indicating this small complex was indeed a space for food consumption. In addition to the pavilion the

[11] Jars date from the late 3rd to early 4th centuries (Seoul Baekje Museum/Hanshin University Museum, 2011: 129-132)

area just inside the western Pungnab wall contains a very large and likely partially tiled structure resembling a house. S-b. Park (2010: 136-7) has suggested that this structure was a meeting or ritual space, and the lack of finds compared to the surrounding houses indicates that this space was kept clean for some non-domestic use.



i ii

Figure 5-11: Two large platform[12]/pavilion structures at (i) Pungnab fortress and (ii) Mongchon fortress.

Such meeting places point to more circumscribed gatherings, facilitating smaller scale face-

[12] Here, platform refers to an open air wooden platform placed atop stone or wooden struts or columns.

to-face contact and the intervisibility of all participants. Participation would therefore have been more exclusive. However, none of these structures appear to have been walled off from the rest of the site, nor hidden from general view. The people involved in these meeting or meals could have therefore been widely identified by others within the settlement. At Pungnab fortress these meetings were apparently located in a part of the settlement primarily given over to domestic life, a place occupied by people sponsoring feasting and who had more exclusive access to status signifiers (see below for further discussion).

There are only two candidate meeting structures on sites outside of the two central fortresses. The first was at the village of Jajak-ri, near the northern boundary of the study area. The structure is a platform supported by posts in a 5x3 arrangement with a ground area of 39.2m^2, making it the largest post/platform structure outside of the central fortress sites. The arrangement of the posts is very even, resembling those of the Mongchon pavilion (see Fig. 5-11ii). This evenness is in contrast to another large post structure at Seoku-ri, where posts are very uneven and misaligned (see Fig. 4-8ii - right). Although it is possible that the structure at Seoku-ri may be a more makeshift platform, it is located between two drainage ditches and within a sequence of features that match the profile of the granaries common through the study area. This structure is therefore judged to have been a storage building.

Another possible meeting space is situated in the hamlet of Wanglim-ri on the Hwaseong plain. Here, a complex, multiphase set of structures culminates in what was likely a square platform or roofed-structure supported by over 22 wooden posts (Fig. 5-12). Through analogy with later buildings, and the structure's placement next to a well and the cemetery of Maha-ri site around 1km away, the excavators suggested the structure was a place to wash and treat the dead prior to burial (Jungbu Institute for Archaeology, 2012: 171). While this suggestion is certainly plausible, the posts could also have supported a platform or pavilions structure for

smaller scale gatherings. Furthermore, while evidence for any scale of feasting here is limited, Wanglim-ri does have an elevated relative proportion of stylized serving vessels for a hamlet site (although n=6 only; see Fig. 5-9).

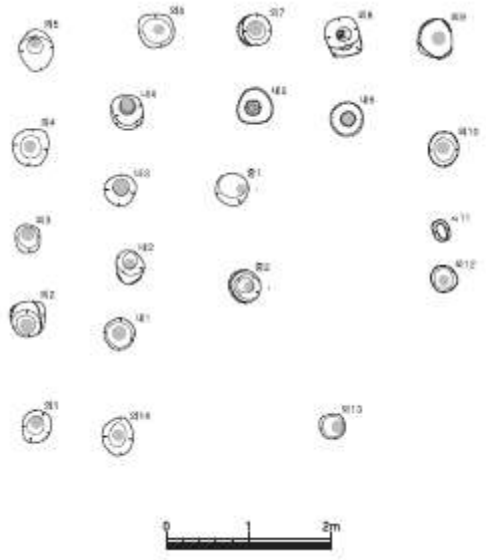


Figure 5-12: Possible platform or pavilion at Wanglim-ri (modified from Jungbu Institute for Archaeology, 2012: Fig. 15, p. 37)

In the cases of Jajak-ri and Wanglim-ri then, any social gatherings would have been small in scale, somewhat replicating the situation seen at the fortresses. Whether meetings were of a purely intra-site nature or drew in actors from other settlements is unclear. Either way, participants would all have been known or visible to each other and anyone else in the vicinity.

5-i-iv: Storage

The Early Baekje period saw a dramatic expansion in the number of sites with, and the total number of, storage features (both pits and post structures). During the LIA only 36.7% of sites had any kind of storage feature, and such features were overwhelmingly concentrated in just four village sites (with 92.6% of the storage features). In the Early Baekje period 55% of sites (n = 22) had at least one storage feature, and 11 sites now account for 91.2% of the total number of such features.

During Protohistoric Early Baekje, not only were the storage features more evenly spread among sites in general but also among the various types of site (see Table 5-7). Although the sites with the highest raw numbers of storage features are still village sites, those with the highest percentage of features given over to storage tend to be hamlets (Table 5-7, also refer to Table 4-5). With a median figure of 10.8%, six of 11 sites with figures above the median are hamlets, along with three villages and two fortress sites. Two of these villages, Misa-ri and Seoku-ri, included large (dry) field systems, and thus it is likely that hamlet sites with high proportions of storage features were also sites of agricultural production.

It may be tempting to suggest that smaller settlements became subordinate production sites for the rising elites (e.g. Kim, 2015), particularly when considering their residents' restricted access to status signifiers. The increased prevalence of storage facilities means that either household storage became less prevalent for some reason or productivity increased noticeably over time, likely due to wider access to iron tools (see Yi, 2009a). In light of M. Kim et al's (2016) study of household ceramic assemblages in the same region, the latter case appears more plausible.

At the majority of hamlets however, extra production was primarily stored in pits (70.4% of features) rather than the openly visible storage bins or granaries (29.6% of features), suggesting most production was consumed by individual households. Such pits were generally located near housing clusters or on the sides of nearby hills. The figures are almost identical for the newly emerging village sites of Seoku-ri, Mabukdong and Jajk-ri (averaging 71.1% pits and 28.9% above ground structures). The community or particular members of that community apparently therefore maintained a significant degree of control over agricultural products.

Site (site number)	Site Type	Total Storage Features	% Features for Storage	Storage Facility Distribution
Mongchon (31)	Fortress	12	38.7	Multicentric
Gwanyangdong (17)	Hamlet	10	32.3	Scattered
Wanglim-ri (44)	Hamlet	13	28.9	Multicentric
Seoku-ri (37)	Village	50	27.9	Scattered
Byeollae (5)	Hamlet	8	23.5	Monocentric
Namyangdong (34)	Hamlet	3	16.7	Scattered
Gilseong-ri (12)	Fortress	6	11.5	Scattered
Myeokjeolsan (32)	Fortress	3	9.1	Monocentric
Yangchon (45)	Hamlet(s)	3	7.7	Monocentric
Jajak-ri (21)	Village	9	7.4	Monocentric
Pungnab (36)	Fortress	22	6.2	Scattered
Suji (42)	Hamlet	1	5.3	Singular
Mabukdong (26)	Village	24	4.8	Multicentric
Minlakdong (29)	Hamlet	1	4.0	Singular

Table 5-7: Protohistoric Early Baekje sites (250-400 AD) with storage features (transitional sites not included – see Ch. 4); including the percentage of features given over to storage and the site-level distributions of such features (site number correlates with Table 5-1). Italicized site names are those without any clear radiocarbon dates.

Different types of storage facility could also have been used to store different products. H. Lee and H-w. Lee (2016: 108-110) examine archeobotanical evidence from the (as yet unpublished) Gorimdong site at Yongin[13], finding that the ubiquities of all crop types (including wheat, barley, beans, and rice) are similar within household contexts but rice and beans are dramatically lower in ubiquity within storage pits. They suggest that rice and beans were valued as status signifiers, and were thus kept in houses to minimize loss. M. Kim (2015)

[13] Because the excavation report has yet to be published the Gorimdong site has not been included in the settlement analysis here or in Chapter 4. More details about the Gorimdong site are given in Chapter 6, where ceramics from the site are analysed.

makes a similar point about rice often being a valued foodstuff for communal feasting; arguing that, starting in the LIA, control over rice cultivation gradually became centralized, with post buildings being given over to rice storage as a taxed good. Such suggestions are hard to confirm because post building remains leave no archeobotanical traces, and other scholars have suggested such structures may have been used to monitor or administer surrounding activities (e.g. Lee, 2011: 89). Examining possible movements of rice towards certain central settlements would require extensive work identifying how rice was transported and investigating regional exchange networks, work that remains to be carried out.

Whether the two types of storage feature were storing different kinds of product or not, the distinct co-presence of one highly visible type and one less visible subterranean type has important implications. Granary structures tend to be focused in specific clusters, while the distributions of pits tend to be more scattered, often away from any domestic areas. Granary features are also associated with central clusters or features; for example at Seoku-ri, Jajak-ri and Mabukdong granary structures associate with house clusters that heavily utilized stylized serving vessels and status signifiers (also at Misa-ri). Also, granaries are only present at Wanglim-ri in association with the probable meeting house and well.

Only two settlements show some centralized control over storage pits. At the series of scatterd hamlets that made up Yangchon all storage pits are associated with a house cluster that included two apparently tiled structures. Within Myeokjeolsan Fortress pits also cluster in one narrow area.

Visible storage structures being concentrated in or near particular domestic clusters again highlights that certain people or households were monopolizing resources. Such actors may have had a role administering tax or tribute to the Baekje centre, or may have been using

resources more autonomously. Without further work it remains difficult to suggest with much clarity which scenario is more probable. Either way, throughout this period authority became solidified into specific hands.

Figure 5-13: The storage building in Pungnab's ritual space (from Seoul Baekje Museum/Hanshin University Museum, 2011: Fig. 3, p. 7-8); elements of the roof and walls can be seen in the middle and sides, as can the remains of various kinds of storage pots around the perimeter.

Storage activity took a different form at fortress sites, including the two later mountain fortresses, primarily supporting feasting and ceremony (Ch. 7 offers more detailed discussion). At all but Gilseong-ri, and one structure at Pungnab, only subterranean pits have been found. Mongchon in particular had multiple deep storage pits scattered throughout. Were such pits for periodic or occasional feasts, for times of siege, or both? The evidence

suggests either the first or third option, seeing as fortresses were also sites of intense food consumption. At Pungnab storage pits were primarily located in an area associated with long term and intense domestic activity, along with the bulk of serving ceramics (during Protohistoric Early Baekje) and the meeting places discussed above. As noted, this district was a setting for smaller scale public feasts, with specific pits containing high concentrations of debris from such activities. Pungnab's storage building was located at the ritual space (Fig. 5-13), storing imported items and specific types of food product (see above, section 5-i-iii); such products being cached near an open meeting place, active ritual space and probable ceremonial building make it more likely that the storage here was to support such ritual rather than dedicated storage for occasional sieges.

5-i-v: Production Activities

Twenty-one sites dating to AD 250-400 showed evidence of metalworking, pottery-making, or glasswork. Production activity is seen on all types of site, fortress sites (n=2), villages (n=8), and hamlets (n=5). Six dedicated production sites can also be identified, all but one in the Hwaseong region. Indeed, Figure 5-14 shows that a great number of production sites clustered in the Hwaseong region; sites with kilns were particularly abundant here, and the smelting site at Kiandong probably remained active into this period. Sites with kilns actually became more abundant across the region, reflecting an emerging emphasis on greyware and black burnished pottery production (see below). Finally, as in the LIA, metalworking evidence was widespread, although evidence of ore processing and smelting was not; evidence of smelting facilities at Kiandong, on the Hwaseong plain (Fig. 5-14). Again, the implication is that sites were importing raw iron to work or reworking existing iron items.

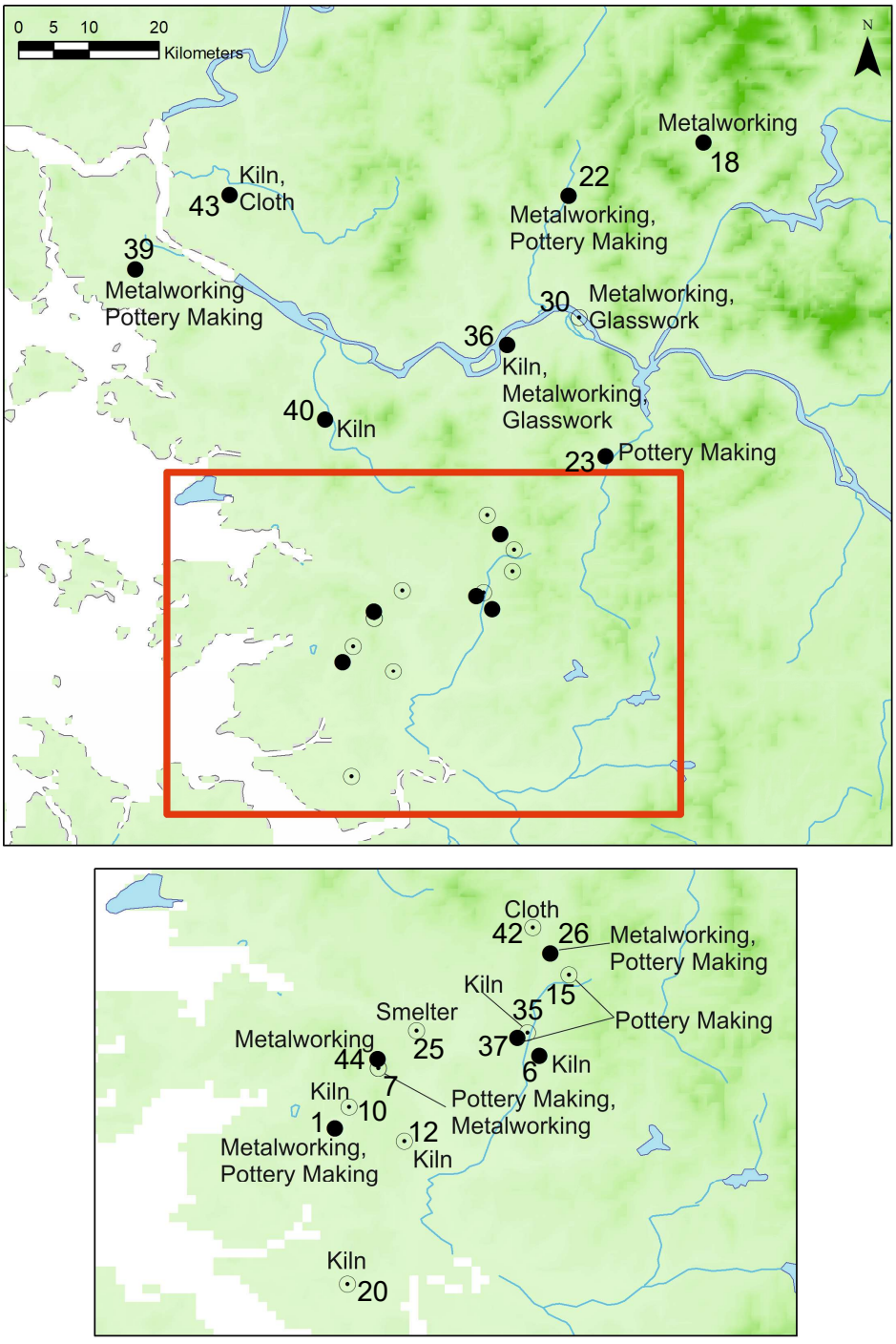


Figure 5-14: Production activities evident on Protohistoric Early Baekje sites (250-400 AD).

Site (site number)	Site Type	Types of Production	Distribution of Activity
Pungnab (36)	Fortress	Metal (slag, furnace wall fragments, iron waste), Pottery (kiln, wasters)	balanced multicentric (pottery making and metalworking areas separate)[14]
Seoku-ri (37)	Village	Pottery (tools, kiln wall fragments, wasters), Metal (slag, iron waste)	Multicentric
Mabukdong (26)	Village	Metal (slag), Pottery (wasters)	Multicentric
Cheonggye-ri (6)	Village	Pottery (kilns, wasters)	monocentric (500m removed from the domestic area)
Gilseong-ri (12)	Fortress	Pottery (kiln)	singular[15]
Suji (42)	Hamlet	Cloth	Singular
Gugal-ri (15)	Hamlet	Pottery (probable kiln)	Singular
Wanglim-ri (44)	Hamlet	Metal (slag, iron waste)	unknown[16]

Table 5-8: Types and distributions of production activities on Early Baekje settlement sites (250-400 AD) (for transitional sites see Ch. 4 – site number correlates with Table 5-1); sites in italics have no clear radiocarbon dates.

Broad areas still appear to have been self-sufficient, with many sites both working metal and

[14] Evidence for glassworking, a bead mould, was also found at Pungnab, however it appeared in a ceremonial context and thus is unlikely to denote the on-site locus of production; although glass production may have taken place within Pungnab it is not included in this table.

[15] One kiln containing Baekje pottery debris is reported from within the fortress wall but not yet published in detail (see Jungbu Institute for Archaeology, 2013: 9).

[16] Within the bulk there were isolated pieces of slag and waste iron but these finds were not associated with any particular context.

producing pottery. However, glass bead production specifically appears to have taken place only in the central area, at Misa-ri and potentially at Pungnab. The Early Baekje leadership therefore appears to have been able to monopolize glass working.

That most glass beads outside of the central fortress were concentrated at Yongin is also unlikely to be a coincidence. Of the 16 contexts containing glass beads 11 of them are either at the centre (Pungnab, Mongcheon) or at Yongin (Seoku-ri, Mabukdong, Suji). If LIA transition sites are removed *all* contexts are in one of these two areas (ten of ten contexts). A comprehensive survey including funerary contexts must be carried out to firm up this pattern, along with typological and compositional analysis. But Yongin's geographical position at the one end of a valley corridor linked to the Baekje centre, and with riverine connections to the south (see Fig. 5-1), places the area as an intermediary between the production areas of Hwaseong and the Early Baekje centre. Certain individuals at Yongin were therefore in a position to control the flow of goods between Hwaseong and Pungnab-Mongchon (see Ch. 7).

The activities of artisans on the site level continued to resemble those of the LIA and transitional sites[17], particularly on village sites. In villages and fortresses residents of specific areas were specialized in certain activities (Pungnab) or multiple residence clusters were engaged in multiple types of production (Mabukdong, Seoku-ri) (Table 5-8). The latter case is uncommon however; at most sites though artisans became more specialized as the period progressed.

In contrast, the sites of Cheonggye-ri and Wadong-ri give insight into how production was likely organized in places where only kilns or smelters have been found. At these two sites

[17] Transitional sites tend towards multicentric distributions – see Table 4-4: Misa-ri, Balan-ri, Janghyeon-ri, Wadong-ri.

the kilns and workshops were located 500-1000m away from the main area of settlement, making it likely that identified production facilities (e.g. at Kiandong, Nongseo-ri, Sohadong – Fig. 5-1) were similarly associated with villages in their vicinity. Specialization to narrower ranges of goods appears to have been the norm on such sites; for instance, manufacturing debris at Cheonggye-ri is dominated by very large storage jars (also at Gajae-ri), whereas at Sohadong smaller storage jars, serving vessels and black burnished pottery was being produced. Identifying the exchange networks that such specialized sites were involved in will be crucial future work that will allow us to unpick whether these were subordinate sites supplying particular groups of authority, or whether the crafters had more autonomy in who they dealt with.

5-i-vi: Change and Constancy

The Early Baekje Period saw very significant changes to social organization, interaction networks, and the organization of some aspects of production; yet important aspects of LIA society persisted. Tendencies towards centralization and specialization are apparent, with individuals from particular settlements taking control over certain resources. Some fortresses and villages also became centres of communal action, providing the settings for ceremonial events and/or food consumption. Residents of these settlements, or a subset of residents, secured ever more exclusive access to particular status goods (imported items, glass and 'jade' beads, black burnished pottery styles). Pungnab (and nearby Misa-ri) emerged as places where glass bead making was concentrated, and thus possibly under the control of certain actors at the Baekje centre; the same may have been the case for precious metal working (see 5-ii below). In addition to this trend towards centralization on the wider scale, various non-central sites (almost all hamlets) show evidence that one residence cluster was a focal point for activities such as ceremony, coordinating certain storage, and/or food consumption.

The building of the earliest fortresses themselves also demonstrates a mode and scale of social organization unseen previously, with periodic gatherings over multiple years coordinating the labour and supply of up to (or just over) one thousand individuals. As noted, the majority of these people were likely to have been the residents of Pungnab village and communities nearby. Chapter 7 will discuss these issues in detail, but in the late 3rd century Pungnab village grew as a trade centre and a place to organize missions to the court of Jin China. Certain residents were able to monopolize exchange with China, securing their own prestige and authority, while new wealth, opportunities, and the need for mission supplies appears to have attracted a substantial population. The feasting and ceremonial practices at Pungnab integrated the community, possibly both repaying those working and strengthening ties among them and local leaders. Such leaders were multiple, sponsoring smaller scale feasts and ceremony. The building of the walls was therefore a collective project, although it will have also acted to reinforce the position and authority of Pungnab's leaders.

Despite significant changes, at both regional and site scales remained some points of clear continuity from the LIA. Elements of multicentricity persisted in both the bipolar nature of the regional authority, somewhat split between the Han River and Yongin, and on various village and fortress sites, where individual residence groups maintained a level of parity and independence in action. Settlements remained open plan, with inter-residence visibility high and no evidence of boundaries or walls, even within fortresses. Much ceramic production and metalworking also appears to have defied centralization, being in evidence on sites all over the region. Indeed, at the larger Yongin villages craft work in various media remained under the control of individual household clusters.

Food consumption and feasting using the new set of Baekje stylized serving ceramics also remained activities that individual residence groups engaged in, even though the distribution

these activities was not evenly dispersed regionally. Even within Pungnab fortress, until the post-AD 400 layers, over three-quarters of stylized serving vessels were concentrated in the domestic district near the western wall rather than in the ceremonial space at the centre (see more below). Residents of hamlets also maintained significant autonomy regarding food storage and use, at least in the case of the emerging paramount residences.

Key villages at Yongin exemplify these trends of change and constancy. Compared to those on the Hwaseong plain, individuals from the villages of Seoku-ri and Mabukdong, and the hamlet of Suji, had an almost exclusive access to status goods and the paraphernalia of the feasting culture prominent at Pungnab. On the wider scale the two villages were clear centres of feasting, and some residents had exclusive access to status signifiers (either their production chains or exchange networks). Yet within the villages no one household had a monopoly on status, at least over the longer term.

The existence of multiple smaller centres within the Yongin area demonstrates a continued flux and flexibility in terms of who could acquire status goods and who had authority. Although it could not be included in the full analysis, the settlement site at Gorimdong (see Fig. 6-6 for location) was also among these important villages. There was activity here from the earliest part of the Baekje period, with households procuring (or making) stylized serving vessels, black burnished pottery, roof tiles and Chinese ceramics. It was the first site outside of Pungnab but within the Han River basin and Hwaseong region where such Chinese stonewares have been discovered (H. Lee and H-w. Lee, 2016). The existence of a fourth population in the Yongin area with access to status goods further underlines that authority and participation in the relevant exchange networks remained up for grabs in a similar way to the LIA, at least within this limited and strategically placed area.

	Import-style Ceramics	Black Burnished Pottery	Jade Beads	Glass Beads	Other Beads	Bronze Mirror	Ritual Bronzes	Ring-Pommel Sword	Misc.[18]
All Contexts (n=621)	8.1%	4.3%	1.1%	1.6%	1.1%	0.2%[19]	0.3%	0%	0.2%
Transition Sites Removed (n=393)	6.6%	5.9%	0.8%	1.9%	0.3%	0.3%[17]	0%	0%	0.3%

Table 5-9: Regional scale ubiquity scores; aggregating Early Baekje sites (250-400 AD) with at least one context that contained status signifying goods. Figures for all such sites in the region (n = 18) and the situation with transitional LIA sites removed (n = 11) are presented.

The types of status-reputational symbols Early Baekje people were using and paying attention to also reduced, accompanying their concentration into the hands of fewer actors. Various LIA symbols thus lost their relevance, and those that continued to be used likely changed in meaning. Rather than having multiple sets of authority signifying goods, Early Baekje sees a narrower emphasis on particular types of ceramics, those used in ceremonial and/or food consumption activities that supported a novel community of practice (Table 5-9 – detailed discussion in Ch. 7). The significance of beads other than glass drops off significantly relative to the LIA, at least within settlements. Newly emerged settlements show this trend most

[18] Including an inkstone (at Yangchon).

[19] This is the same context, at Misa-ri, as noted in the previous chapter. Misa-ri is included here because it has no relevant AMS dates, so it cannot be determined with any reasonable probability when the site was formed and abandoned.

clearly, where the prevalence of glass beads increased while that of other types declined (Table 5-9). Ritual bronzes also disappeared from the assemblage, suggesting that the relevant ritual action either migrated to a non-settlement context or simply lost its relevance.

Table 5-9 shows that ceramics became the predominant goods used to signal status, both import style and black burnished pottery. If import style and stylized serving ceramics are combined as markers, ubiquity scores are 16.4% for all contexts and 23.2% if the transition sites are removed, underlining the newly emerged importance of communal feasting and/or ceremony using a particular set of ceramics. The centrality of feasting and the decline in other classes of LIA status signifier signals an end of heterarchy in terms of the existence of multiple fields of authority. However heterarchical principles were still salient because feasating and ceremony remained within the purview of multiple autonomous households. As noted, these actors were concentrated in the Pungnab-Mongchon complex and at Yongin area (plus potentially in the later mountain fortresses), thus a discussion of these sites in particular is needed, examining the contexts of feasting activity and settlement structure.

5-ii – Emerging centres: Pungnab, Mongchon, and Yongin sites

As outlined above, during Early Baekje certain people living in two particular geographical areas dominated in terms of access to and/or use of import-style and stylized serving ceramics and glass beads. Such elements were part of the material set that facilitated the communal activities of a newly dominant trans-regional community. Within these two areas five settlements stand out, Pungnab and Mongchon earthen fortresses at the mid-Han River, and Seoku-ri, Suji, and Mabukdong at Yongin. This subsection examines the layouts of these settlements, their assemblages, and the spaces that reflect the contexts of communal activity. All forms of the stylized serving vessel set were used in both areas, and analogous contexts of

deposition point to a common and mutually recognizable tradition. However people in each region placed differing emphases on particular elements of the set. Residents of Yongin villages therefore were either unable to reliably procure certain elements or particular ceramic forms had particular local meanings and histories (likely the latter – see Chapters 6 and 7).

5-ii-i: Five Key Settlements

Pungnab and Mongchon fortresses (see Fig. 5-4), cumulatively encircling 0.73km^2, represent a focal area of settlement and activity unrivaled elsewhere in the region, likely having a large and concentrated population. In contrast, the cumulative extent of excavations at Seoku-ri, Mabukdong, and Suji is just 0.06km^2, although the full extents of these settlements are unlikely to have been unearthed. Excavations at Pungnab fortress have revealed what may be labeled as three districts, (i) the ritual centre (with a potential shrine, numerous ritual pits, a well, and a storehouse), (ii) an area with houses and a pottery kiln, and (iii) Area 197, a site of domestic activity (including multiple storage pits), metalworking (possibly including precious metals – see below) and the meeting facilities discussed above (see Fig. 5-15). No obvious boundaries exist within or among these districts. Mongchon fortress also appears to have been open within its walls, but with a low density of structures and pits. The pavilion discussed above is paired with an artificial pond near the western wall. Another such pond was located near the southern gate.

The two villages and one hamlet at Yongin are all within around 10km of each other, with Suji and Mabukdong less than 4km apart (as the crow flies). Both Seoku-ri and Mabukdong had two or three obvious residence clusters (e.g. see Fig. 5-7), while Suji was a small hamlet made up of one group of four houses and another group of two; the two groups were situated around 70m apart. All three settlements resemble LIA sites, open plan with no clear boundary

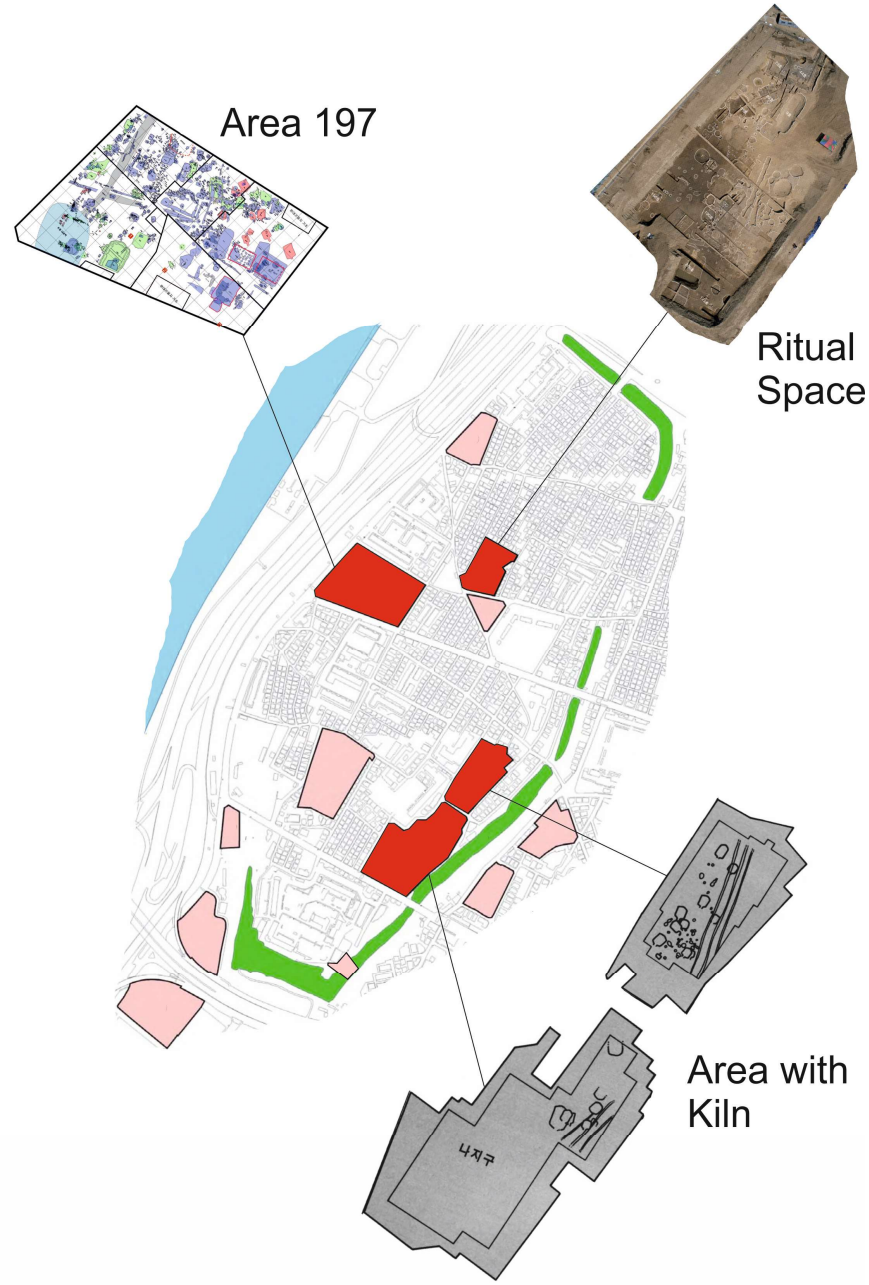


Figure 5-15: Three identified 'districts' within Pungnab fortress (modified from Seoul Baekje Museum/Hanshin University Museum, 2015: Fig. 2, p. 5); the ritual space (from Seoul Baekje Museum/Hanshin University Museum, 2015: Colour Photo 1, p. i), the domestic and metalworking area at Area 197 (from NRICH, 2012b: Fig. 3, p. 45), and the area with kiln (from NRICH, 2001: Fig. 2, p. 42). Pink areas indicate other surveyed or excavated sections (as yet unpublished), and the green areas signify extant earthworks

markers between residence units, thus high inter-visibility.

5-ii-ii: Assemblages

Table 5-10 shows that, other than gold, silver and gilt bronze items, important status signifying goods were manufactured and used at both the central fortresses and the Yongin area. Items made of precious metals include completed pieces, such as a gilt bronze belt buckle of mid-4th century Jin Chinese style at Mongchon (Park, 2010: 177-181; also Barnes, 2001) and a gold bead in the later layers of Pungnab ritual area. Miscellaneous small pieces, including a sliver of gold, and what appear to be parts of silver and gold fastenings, discovered in Area 197 may indicate manufacturing activity here, in an area where metalworkers also appear to have been active. That skilled Baekje migrants including brocade makers have been recorded as arriving in Japan during the 5th and 6th centuries has been noted by Inoue (1977: 86-88), and backs up a supposition that such skilled craft activity was occurring at in Baekje.

Site	Precious Metals[20]	Import-Style Ceramics	Black Burnished Pottery	Jade Beads	Glass Beads	Agate Beads
Pungnab 250-400 AD	**X**	**X**	**X**	**X**	**X**	
Pungnab post-400 AD	**X**	**X**	**X**	**X**	**X**	
Mongchon	**X**	**X**	**X**	**X**		
Seoku-ri		**X**	**X**		**X**	
Suji					**X**	**X**
Mabukdong		**X**		**X**	**X**	

Table 5-10: Status signifiers present on the five key sites.

[20] Items of gold, silver or gilt bronze.

Site	Import-Style	Footed Bowls	Tripod Dishes/Plates	Bottles	Stylized and Lidded Bowls	Pot Stands
Pungnab 250-400 AD (n= 473)	18.0	26.2	22.6	6.1	12.9	14.2
Pungnab post-400 AD (n= 213)	5.2	43.7	23.9	0.5	21.1	5.6
Mongchon (n= 412)	4.9	40.5	24.3	1.9	8.3	20.1
Seoku-ri (n= 74)	1.4	78.4	2.7	2.7	8.1	6.8
Suji (n= 18)	0.0	94.4	5.6	0.0	0.0	0.0
Mabukdong (n= 155)	8.4	76.1	1.3	7.7	4.5	1.9

Table 5-11: Proportions of import-style and stylized serving vessels on each central site.

S-b. Park (2007: 168-17) sees Baekje gold and silver-making as starting from the mid-4th century, being used as exchange goods with polities to Baekje's south. However the working and detectable use of precious metals also marks a point of distinction between the centre and Yongin. If Park's (2007) dates are correct, this development occurred after the completion of the first Pungnab wall phase and just before or at a similar time with the first wall extension and the building of Mongchon fortress. That such artisans exclusively resided within Pungnab-Mongchon indicates a further centralization of control over status signifiers, further monopolization of resources by leaders within the fortresses. The active distribution of these and other goods (imported ceramics for instance; Park 2007) to places further south also suggests a recalibration of interaction networks, wherein local leaders from further afield started to participate in Baekje's elite community of practice (discussed further in Ch. 7).

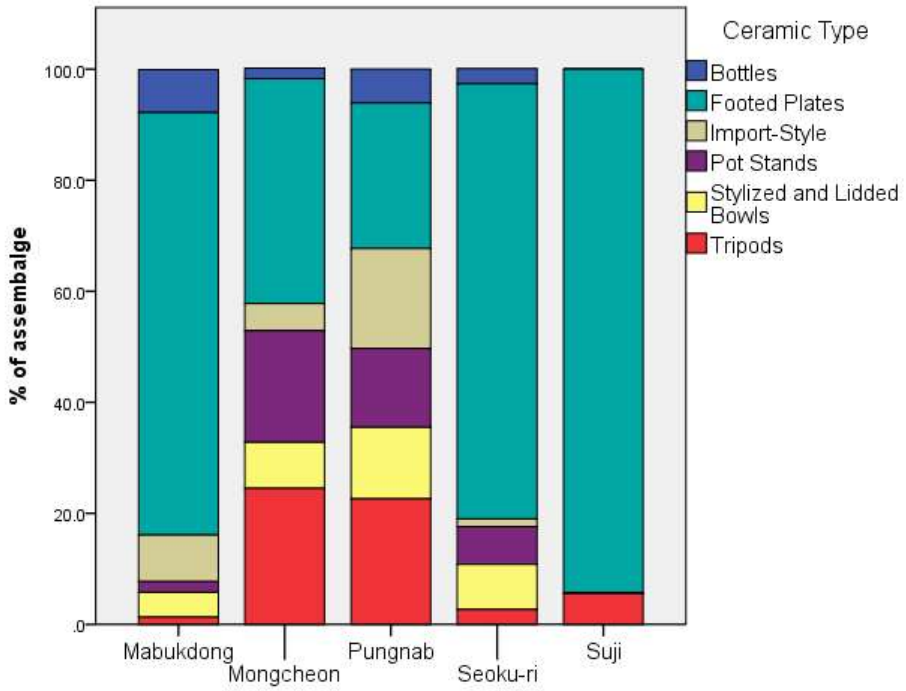


Figure 5-16: Graphical representation of Table 5-11, showing the relative proportions of each type of ceramic vessel (250-400 AD only).

A distinction between the two fortress sites and the settlements at Yongin can also be seen through the forms of stylized serving vessels those holding public feasts were using (Table 5-11). At Yongin the footed bowls predominate, whereas there is more balance at Mongchon and Pungnab (Fig. 5-16). All types of vessel were used in both areas; however tripods and pot stands (Fig. 4-4, Fig. 5-10) had a more significant role at the fortress sites. Imported ceramic styles were also highly prevalent during the earlier phase of Pungnab fortress (Table 5-11), highlighting the importance of trade missions to China and its control by the leaders residing there. Relatively intense contact with China also complements the point that tripod vessels were likely adapted from Chinese styles. Chinese feasting culture thereby played an

important role in the development of a Baekje communal feasting culture (as noted by Jung, 2015).

The emphasis on footed bowls at Yongin may signify a reliance on authorities within the fortresses for access to other styles, an access that appears to have been highly restricted. Alternatively, other types may have held less significance for populations outside the centre, populations who had less direct contact with China and the centre. Footed bowls have a deep history on the Korean peninsula, and the use of similar forms pre-dates the emergence of Baekje and formal exchanges with Chinese authorities. Analogous types can be seen during and prior to the LIA in eastern and northeastern Korea and parts of Manchuria (Zhushchikhovskaya, 2013; Yoo, 2014; Byington, 2016: 101-139). Furthermore, material styles demonstrate some mode of cultural contact with these northern areas, penetrating into the Han River basin during the Early and Late Iron Ages (see Yoo, 2009); a longstanding interaction network often overlooked in its significance in favour of the Yellow Sea sphere (Blackmore, 2019; also Aikens et al, 2009). Footed bowls may therefore more significant and more recognizable to the people of Yongin and Hwaseong, with their use in feasting and ceremony holding more cultural capital than items from Pungnab.

In keeping with the prevailing heterarchical principles during the LIA, feasting at Yongin and the use of Baekje's ceramic set was organized by the autonomous authorities that had positioned themselves as mediators between Baekje and Hwaseong. As discussed in the next chapter, the prestigious black burnished pottery used at Yongin was not imported from the centre but likely was produced within or around that region (or at least by artisans located away from Pungnab). People at Yongin were independently manufacturing or procuring important elements of the ceremonial/feasting set, using it within their own local context and to facilitate their own goals. Thus, the emphasis on footed bowls at Yongin was likely due to

local social meanings rather than an inability to procure or make other forms.

5-ii-iii: Consumption and Structured Deposits

Close examination of the archaeological contexts that status signifiers and stylized serving vessels were found in reveals that activities at Pungnab, Suji and Seoku-ri show evidence of structured depositional events (such activities appear absent at Mongchon and Mabukdong). A structured deposit may be seen as those that defy classification as "just" expedient waste disposal, showing some selection of material elements and distinct treatment or arrangement of the deposit's contents (see Thomas, 1999: 64-74, 86-88). Yet evidence of structured deposition need not imply that any act of deposition itself was part of some symbolic ritual practice or an explicit framework of cultural rules (Garrow, 2012: 108-9). Structured deposition is a modern concept archaeologists use to describe patterns, yet oftentimes has become the interpretation in itself (Garrow, 2015: 733-4).

Here then, I will try to move beyond simply identifying structured deposits and discuss the potential processes and practices leading to them. In his review of the structured deposition concept, Garrow (2012) highlights how broad the definition of a structured deposit has come to be, ranging from the burial of whole animal corpses in isolated pits to subtly different distributions of certain tools or waste across a site. He stresses the need for archaeologists to be more explicit regarding the particular type of structured deposition being discussed in any one case, and argues that effort should be made to set out the validity of any proposition in detail, supported by explicit consideration of the full range of processes (social and taphonomic) leading to the deposition (Garrow, 2012: 105). Communal feasting and/or ceremonial activities were prominent at all five key settlements, however a deeper understanding of the settings, activities, participants, and types of deposition involved in such

communal action can be gained from a closer examination of the specific contexts where relevant material culture has been discovered.

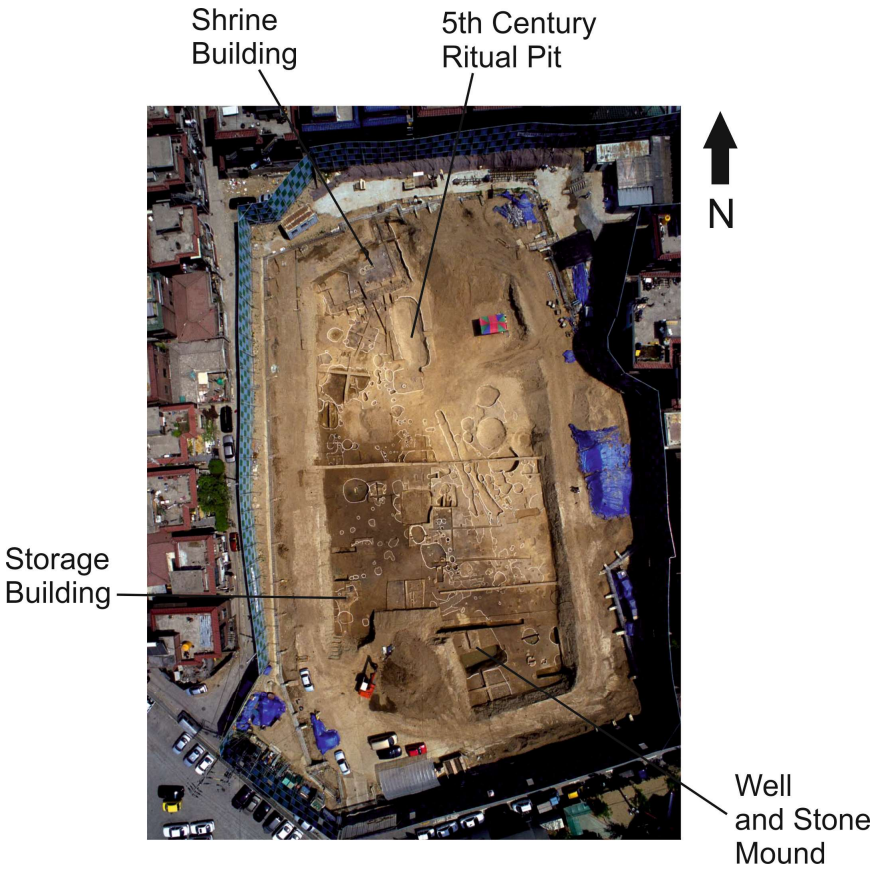


Figure 5-17: The ritual space at Pungnab fortress and some significant features.

The two areas of Pungnab fortress relevant to this discussion are the ritual space and Area 197. During the AD 250-400 period both of these places were sites of feasting/ceremony and structured deposition, but, surprisingly, it is Area 197 where 79.5% of the import-style and stylized serving vessels have been found. Furthermore, for the Protohistoric Early Baekje phase, 93.4% of the site's black burnished pottery was found within this district. Four-fifths of stylized serving vessels were found external to house or structural contexts, with 30.9% being concentrated within just seven contexts (of 116 total contexts in the district), one house

and six pits. Many of these features are shallow, irregular in shape, or part of compound features used several times. One however, Area Na-Pit 60, had multiple serving vessels and pot stands placed in whole or near whole, indicating intentional arrangement and burial.

The overwhelming amount of material in this area indicates that the majority of communal activity was occurring here, among the residents of the domestic district, rather than in the central ritual space. Sporadic concentrated depositions of serving vessels points to occasional or periodic larger scale gatherings, occurring either within the households, within particular housing groups, or at the meeting structures located in the district. Again, there appear to have been multiple leaders, multiple households hosting and funding feasts.

Even though the ritual area (see Fig. 5-17) contained only 12.1% of the total stylized serving vessels for the AD 250-400 phase it was a significant space for communal action, although perhaps with less emphasis on food consumption (at least not *within* the space). Other than the example of Area Na-Pit 60, examples of structured deposition are concentrated in this district. Depositions occurred in an near to the well and subsequent stone mound located at the southern part of the ritual space, where large numbers of storage vessels and bottles were deposited whole, apparently in one event. Several of these vessels were imperfect, having been overfired, showing bloating pores and distorted shapes; further, many of the vessels appear to have had their rims intentionally broken or sharply chipped prior to or during deposition, a tradition also seen elsewhere in the region (see Fig. 5-18). As mentioned, the well was subsequently covered by a stone mound, which itself had serving vessels placed upon it. Additionally, Pit 101, associated with the possible shrine building, was a large compound pit with layers of charcoal that indicate at least two separate depositional stages. Whole and fragmented storage vessels were the primary item of deposition here, although none had broken rims.

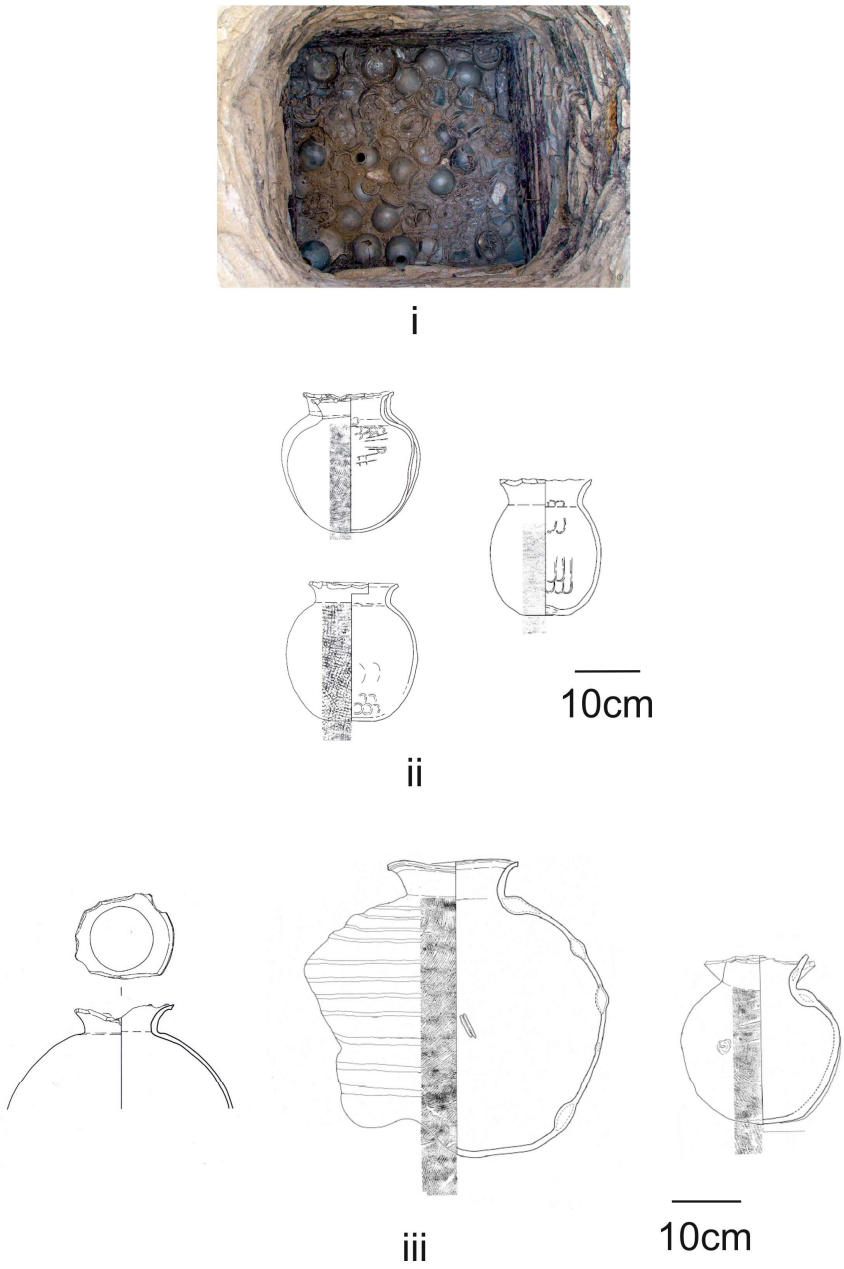


Figure 5-18: (i) the well in Pungnab's ritual space with many whole pots visible (from Seoul Baekje Museum/Hanshin University Museum, 2015: Colour Photo 3-i, p. iii); (ii) examples of pottery with deformation and/or chipped rims from the well at Pungnab (from Seoul Baekje Museum/Hanshin University Museum, 2015: Fig. 23-137, 23-139, p. 52; Fig. 28-168, p. 58); and (iii) examples of pottery with deformation and/or chipped rims from pits at Seoku-ri (from Gyeonggi Cultural Foundation, 2007b: Fig. 93, p. 174; Fig. 95-1, p. 177; Fig. 100, p. 182).

In sum, contexts in the ritual centre contained a minimum of 544 individual identifiable vessels, yet only 11% were serving vessels (compared with 40% for Area 197). This space was clearly a significant site of communal activity. However activities here were of a different mode to the various feasting events happening elsewhere in the fortress.

The most conspicuous evidence of structured deposition at Pugnab thus takes the form of what Garrow (2012: 94 – following Brück, 1999) calls "odd deposits", deposits being notably out of the ordinary for the wider context they are found in. Entire pots with specific breakages or deformities being placed into wells and pits or carefully placed and buried serving vessels certainly fit that bill. Yet Garrow's (2012: 94) other definition of structured deposition, "material culture patterning" (i.e. differential distributions of specific artefact types), is also apparent through the distributions of serving vessels being heavily biased towards the domestic area and being in a minority of pits within that district. Both lines of evidence are therefore mutually supporting, indicating that different types of smaller scale, public, communal activity were occurring in different districts within the fortress.

This situation at Pungnab radically changed during the later phase of Early Baekje. Into the 5th century communal food consumption primarily took place in the ritual space, shifting away from Area 197. These activities also appear to have been more strictly regulated, with over 80% of stylized serving vessels (total site n = 213) now concentrated in three large pits, two in the ritual space and one in Area 197; of these 86.9% were found in the ritual space.

The clear focal place for the deposition of feasting paraphernalia and probable animal sacrifice[21] was a large oval pit (Pit 9 - 13.5m long, 5.2m wide, 2.4m deep), the contents of which implies a completely different mode of feasting and communal activity from

[21] Evidence includes 10 intact horse and cow heads (also see Kwon, 2008).

previously. This pit was situated next to the shrine building, which had been burned down sometime prior to the pit's appearance (see Fig. 5-17). This pit held two-thirds of this phase's stylized serving vessels and nearly half of the non-serving ceramics. Forty-eight beads (made from 'jade', other stone, ceramic, and one gold example), horse gear, a glass bead mold, fragments of horse figurines, and almost half of the site's black burnished pottery were also found here. General remains of boar, cow, fish, and plum stones also indicate food consumption. This pit was dug in seven spits, with the material profiles differing among these layers (Kwon et al, 2004), which, in addition to the probable sacrificial animal remains and the fact that status signifiers such as beads are now being deposited, indicates a novel type of structured deposition activity that was repeated over time.

Such mass depositional events indicate mass gatherings involving large-scale public ceremony and feasting. Feasts were no longer under the control of households but took place in a central space, suggesting that households had somewhat lost their autonomy and authority was invested in some other agent or institution (discussed further in Ch. 7). The structured deposition of broken or chipped rim storage vessels also continued in this part of the fortress, seen via a pit near the earlier well and stone mound feature. These events may or may not have been a part of the large-scale ceremonies themselves, but the ritual space was now central to Pungnab's (and Baekje's) public life.

At Yongin, the Seoku-ri settlement also showed the occasional deposition of overfired/deformed vessels and large pots with broken rims (see Fig. 5-18); however it is certain house contexts (with exceptions) that contained the highest concentrations of serving vessels. Such houses were situated in both the western and eastern residence clusters along with other features (pits and ditches) showing evidence of debris from communal food consumption and aforementioned structured deposits (see Fig. 5-19). At Suji, on the other

hand, 55.6% of stylized serving vessels were concentrated in just one one-off deposition; all such vessels are footed bowls (n = 10), accompanied by a plain bowl and six small jars. These items were placed on the ground whole and then covered with soil.

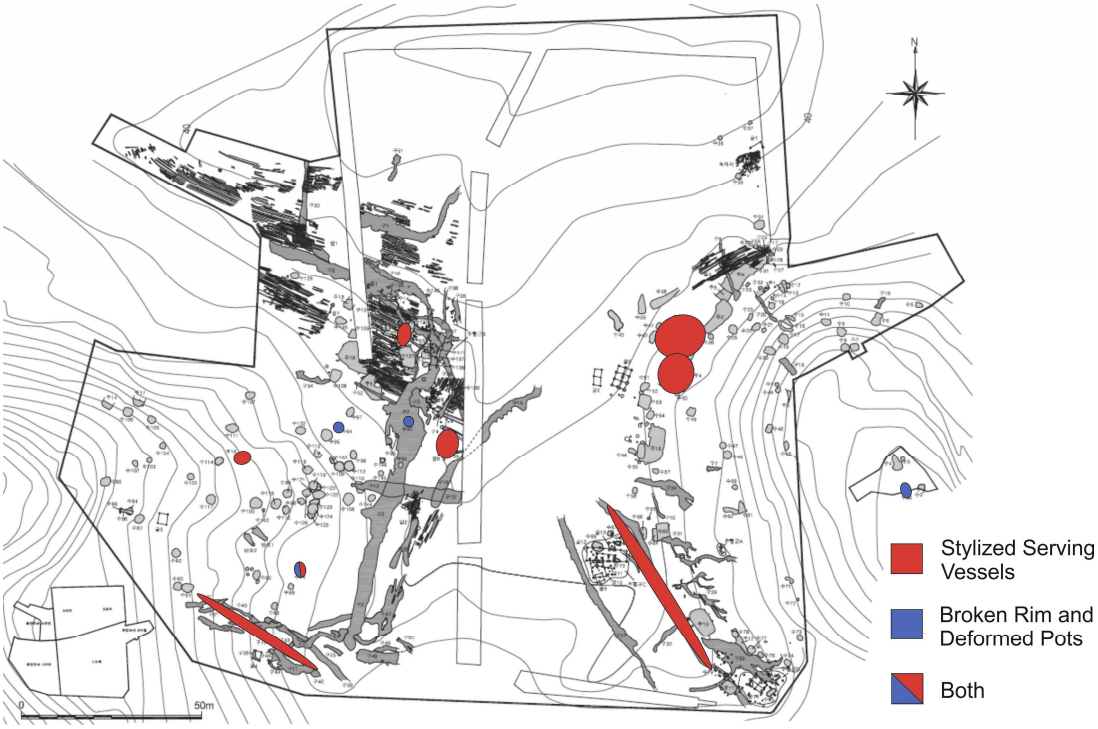


Figure 5-19: Features at Seoku-ri with concentrations of stylized serving vessels, broke-rim pottery, or both (modified from Gyeonggi Cultural Foundation, 2007b: Fig. 6, p. 33).

These two settlements therefore show evidence for communal food consumption (or related ceremony) within houses, in public, *and* the burial of deformed and intentionally broken pots. None of these activities were within the exclusive purview of any specific residence group. Common activities with those identified at Pungnab are thus visible, taking place with an analogous 'set' of material items (but with a distinct local flavour) but on a smaller scale.

The context of feasting evidence at Mongchon fortress shows quite obvious differences from

that at Pungnab. Here, six features (a house, three pits, two ponds) scattered throughout the fortress hold 60.2% of all stylized serving vessels, with the assemblages dominated by well-worn fragmented sherds. Rather than deposition taking place after a particular event, regardless of the state of a vessel, the deposits at Mongchon were thus likely the results of waste discard.

Perhaps the most significant areas in terms of communal action were the two ponds. One (30m long, 15m wide, and 2.5m deep) associated with a pavilion structure and the other (a rough circle of 20m diameter and 1.5m deep) just inside the south gate. Combined, these ponds contained almost 30% of the site's stylized serving vessels and nearly three-quarters of the site's black burnished pottery.

A significant proportion of the feasting activity within Mongchon was therefore centered at and around the ponds and pavilion. The nature of the ceramic evidence indicates a build up from repeated smaller events rather than occasional larger scale formalized ceremony. Therefore another, somewhat distinct, type of activity was taking place at Mongchon; more intimate and with fewer participants, reminiscent of earlier small scale feasting. Despite the more exclusive setting, these activities were carried out using the same material set as the mass feasts at Pungnab. Many of the primary actors were thus likely to have been the same people at both fortresses.

Finally, the situation at Mabukdong was very different from that at the other four sites. Despite the village's relatively high proportion of serving and stylized serving vessels, no features stand out as having high relative concentrations of serving vessels. Stylized serving vessels were spread quite evenly across the site. That said, houses do appear to have been the primary loci of food consumption activities. Nine houses in particular (of 71 total) contained

over half of the non-local pottery styles on the site, and were almost twice as likely to contain stylized or lidded bowls.

These houses were spread between both main residence clusters, where their residents were able to procure material status signifiers and apparently engage in feasting using the material set seen on the other sites. However, these groups were not engaged in larger public events or ceremony. It may be possible that further work on the site reveals some level of public communal ceremony, however at this point activities at Mabukdong appear distinct from those at the other key Yongin village of Seoku-ri (further discussion in Ch. 7).

5-ii-iv: A Developing and Dynamic World of Authority

One or two paramount worlds of authority may be proposed, shared between two geographical areas and revolving around public ceremony and food consumption. The ability to procure the necessary materials and the knowledge of how to use certain material items signified social authority, along with other signifiers carried over from the LIA. Material and practices would have been mutually recognizable within and between areas, facilitating the emergence of an exclusive community of practice (elaborated in Ch. 7).

Two types of authority may be identified during the Protohistoric Early Baekje period, at least within Pungnab fortress; one involving ritualized activities, including 'odd' structured depositions of intentionally broken jars, and the other echoing LIA-type household level feasting and exchange. At Seoku-ri both structured deposition of broken and deformed vessels and communal feasting took place within or near-to particular domestic units, whereas at Pungnab the locations of these activities remained separate (until the 5th century). At Pungnab therefore, there may have been two separated types of authority building practices, each with different primary actors and different material culture being used.

Outside of Pungnab, at Yongin, the same people or households appear to have effectively monopolized both types of practice.

In this earlier phase authority remained fluid, based more on individual judgment and competition, at least among a certain class of people. At Pungnab public feasting activities were overwhelmingly concentrated in a specific domestic district, staying small scale and spread among multiple residence groups. The migration of these activities to Mongchon fortress and the Pungnab ritual space in the 5th century demonstrates the colonization or monopolization of the paramount world(s) of authority by a single social unit[22]. Considering the relevant recorded history and other archaeological data (e.g. Seokchondong Step Tombs), this single authority is likely to have been the royal house headed by a king, thus placing state formation somewhere in the latter half of the 4th century.

The change at Yongin seen through Mabukdong village also supports this conclusion. The settlement dates from the later 4th century through to the 6th century AD, thus coinciding with the apparent monopolization of authority at the central fortresses. That the context of feasting here apparently moved out of the public sphere and back into the household, along with the fact that public ceremony was not carried out here, may reflect the centralization of public spectacle to Pungnab and a loss of autonomy for leaders at Yongin. That the residents of Mabukdong continued to use the stylized feasting ceramics and had access to import-styles and status signifiers shows that it remained a significant regional centre, but one that had become integrated and subordinated to the Baekje political centre.

[22] Chapter 7 discusses the wider regional context.

Chapter 6

All for One? Decentralized Production, Exchange, and Black Burnished Pottery

The previous chapter established that, while the Early Baekje period saw authority and wealth centralized into particular hands, certain aspects of heterarchical organization remained salient. Among such aspects was the apparently decentralized organization of craft production, particularly regarding ceramics and metalworking. In addition, alliance-making and the sponsorship of feasts remained under the control of particular households, with multiple more-or-less equivalent persons of authority within central settlements, at least in the early phase. At Yongin those holding ceremony and monopolizing authority signifiers were also artisans.

Figure 6-1: Examples of black burnished pottery (two jars and one cup – not to scale) from Stone Mound 1 at the Seokchondong tombs complex (from S. Yi and G. Cho, 2015: Artefact Photograph 29-1, 29-2, p.201; Artefact Photograph 31-1, p.203).

Did decentralized craft organization apply only to utilitarian items or were elements of the stylized feasting set also included? This chapter will take an integrative approach to the production and distribution of black burnished pottery (BBP) (Fig. 6-1), a key element of the

Baekje stylized ceramic set. First, general formal, stylistic and technological features of BBP in the study area are discussed. Detailed petrographic and compositional analysis of 22 BBP samples from six sites within the study area is then presented. Particular distinctions between samples from Pungnab fortress and those from Yongin are highlighted, and their implications for understanding Early Baekje's socio-political organization are outlined.

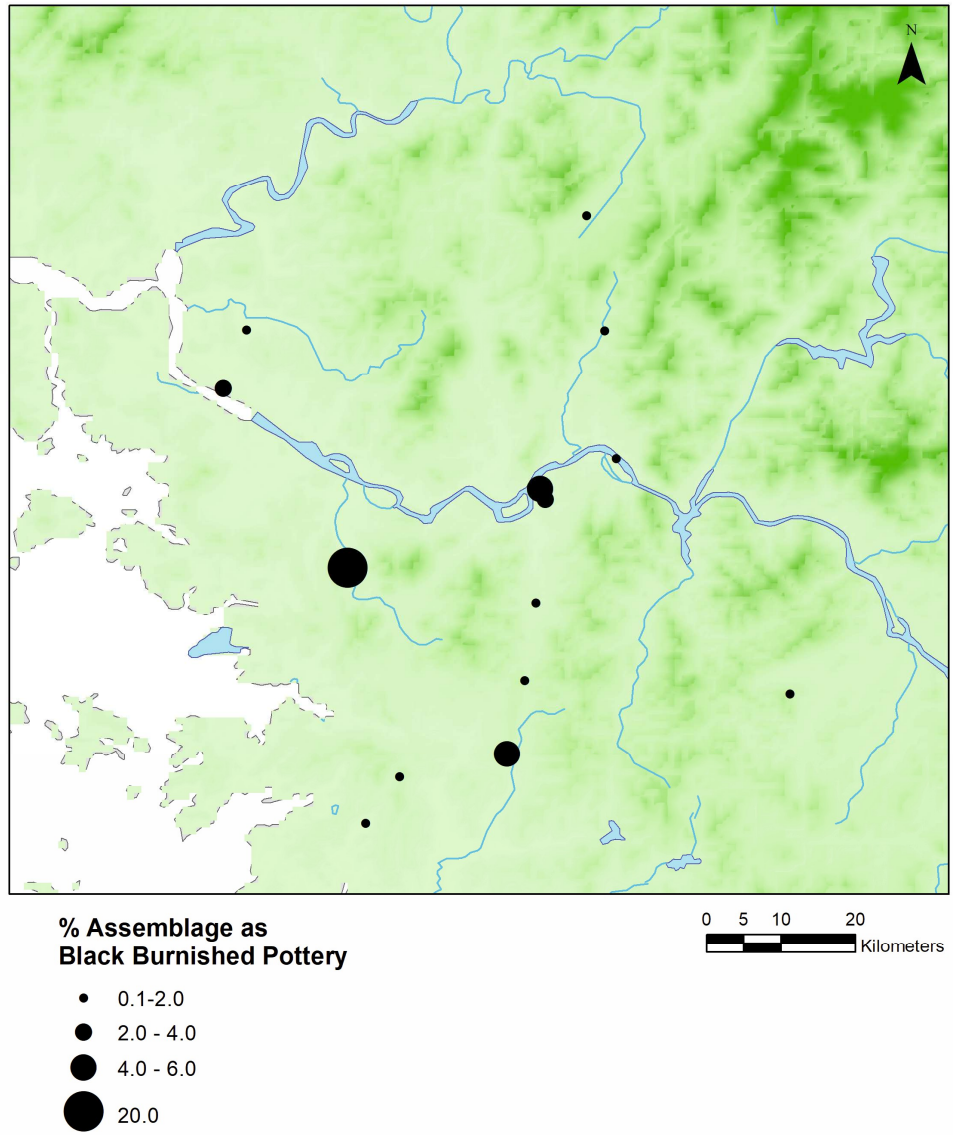


Figure 6-2: Early Baekje (AD 250-475) settlements and production sites where black burnished pottery has been found and the proportion of the ceramic assemblage made up by black burnished ware.

The key question is whether BBP production was closely controlled by the Baekje authorities at (or near) the central fortresses or, instead, autonomously and expediently produced by multiple actors for use in local social practice? The former would indicate a strategy of controlled gift giving by Baekje leaders, like that seen for glass and Chinese ceramic goods (Ch. 5). Clay sources for BBP vessels from all over the study region would therefore have been located near to Pungnab fortress, with standardization in manufacturing techniques and decorative motifs.

Alternatively, were particular raw material sources associated with particular settlements and/or particular technical styles? Different production loci supplying different villages would not indicate central control. Control BBP production by local leaders or the artisans themselves would indicate local autonomy rather than central political control. Also, were artisans independently dealing with multiple actors on multiple sites or were they tied to supplying particular consumers at particular settlements? The former case would indicate a similar organization to that of the LIA, whereas the latter would follow the Early Baekje trend that saw particular individuals or households acquiring greater wealth and authority (see Ch. 5). Either way, a more consensual or alliance-based view of Early Baekje's political structure may thus be needed.

Presently, S-b. Park's (2001a: 115) theory that the production and distribution of BBP was centrally controlled dominates discussions of Early Baekje state formation and social organization, and has done for many years (also noted by Nam, 2013 cited in Walsh et al 2019: 153). Park (1992; 2001a) explicitly associates this ware with the Baekje political elite, and thus with state formation and the expansion of Early Baekje territory and centralized political control. An association with elite activity seems reasonable considering BBP's inclusion in the Baekje ceramic set used in more socially exclusive ceremony and/or feasting

(Ch. 5).

BBP was therefore associated with Baekje's political leadership and its central areas. On Early Baekje sites (AD 250-475) 90.3% of BBP examples within a clear archaeological context (n = 267) were found at three key sites, Pungnab (73.0%), Mongchon (11.2%), and Seoku-ri (6.0%). Furthermore, these three sites had relatively high proportions of their ceramic assemblage made up by BBP; as did the fortress site of Myeokjeolsan and the probable BBP production site of Sohadong[1] (Fig. 6-2).

However whether BBP can be used to infer the extent of Baekje's directly controlled territory is unclear, and, as noted in Chapter 1, the hypothesis of state controlled production has yet to be systematically tested. Although broader ceramic analyses have indicated that there may be multiple loci of BBP production (e.g. Cho, 2006) the numbers of black burnished samples have been just a handful. The aim of this chapter is therefore to test Park's (2001a) assumption. Without a deeper understanding of the organization of BBP's production inferences about socio-political organization based on the distribution of BBP will not have a strong foundation.

While stylistic and other formal analyses alone can yield strong hints about production and distribution patterns (see below), integrating such analyses with combined petrographic and elemental compositional analysis can get to the core of this issue (see Tite, 1999: 201). Provenance and standardization are clearly key questions. If the production of BBP was funneled through one centre we may expect high relative standardization and highly concentrated production facilities (see Costin, 1991; 2001; 2005); also, a restriction of source

[1] At Sohadong, a small production site just over 25km from Pungnab fortress, BBP sherds are found in both the kiln and houses/workshops with other greyware jars and bowls.

clays to those near that centre (see the threshold model of Arnold, 1985: 32-57; 1991; 1993: 200-2). Petrography allows insight into both the local geology of the clay and temper sources used to make a vessel and steps taken in the production process (e.g. clay processing, forming, finishing, and firing) (Tite, 1999; Quinn, 2013; Rice 2015). Elemental composition analyses such as Instrumental Neutron Activation Analysis (INAA – used in this study), allow the identification of distinct compositional chemical groups that are inferred to represent geographically/geologically distinct raw material sources (Arnold, 2000: 359-60; Bishop and Blackman, 2002: 603-4). An integrated approach therefore allows the model of centralized BBP production and distribution to be scrutinized from multiple angles (for example see Quinn et al, 2010; Day et al, 2011).

6-i – Local Technical Styles or Local Consumption Preferences? Typological and Stylistic Elements of Black Burnished Pottery

BBP has been seen as an utterly novel ceramic type, unrelated to Late Iron Age (LIA) wares (Park, 1992: 24-25, 2001a; N-s. Lee, 2001: 192-3), characterized as having been made of fine clay that was burnished in a semi-dry state and fired at a low temperature in a reducing atmosphere (Lee, 2001; Kim et al, 2016: 132). In contrast, petrographic work presented by Daeyoun Cho (2006) and expanded upon here shows that BBP was often tempered and the majority was fired in oxidizing atmospheres of varied temperatures (also see S. Kim et al, 2017). Cho (2006) concluded that the production process of BBP, other than the firing procedure, was consistent with the LIA ceramic tradition[2], making use of the same raw

[2] Tite et al (2001) noted a similar pattern in the southeast of Korea during this period. Potters made no obvious change to the clay sources used when manufacturing earlier earthenwares and later finer stonewares.

material sources and coil building methods. S. Nam and S. Kim (2014) also note that clays used to make BBP were not particularly different from those used to make other Baekje Pottery types. Furthermore, a high relative organic content has been reported for the external surfaces of BBP, indicating either smudging via the burning of organics (Nam and Kim, 2014: 7-9, 11-12; also suggested by Lee, 2001: 193), or the use of plant ash as a surface colourant prior to firing (Kim et al, 2017).

BBP production was therefore clearly rooted in local practice. There is thus little reason to propose, as N-s. Lee (2001) does, that its rarity and supposed novelty indicate that either BBP vessels themselves and/or the manufacturing technology were imported into Baekje. Indeed, methods of manufacture and their heterogeneity are consistent with the Early Baekje interest shown in controlling firing atmosphere (and hence vessel colour) rather than firing temperature noted by Cho (2006). The following analysis further highlights regional variability of vessel form and decoration.

6-i-i: Regionally Variable Vessel Forms

Known BBP vessel forms overlap closely with the other Baekje Pottery stylized serving forms. However bowls and lidded bowls predominated among BBP serving vessels (61% of all serving vessels), and straight short-necked jars were most common overall (other than lids) (Table 6-1; Fig. 6-3) (also noted by Lee, 2001). Preferred vessel types differ between the two central fortresses of Pungnab and Mongchon and those sites elsewhere in the study area (Table 6-1). Bowls and straight short-necked jars were roughly balanced at the former, whereas jars predominated in the wider region. This pattern reflects consumer choice and practice, the vast bulk of examples being from domestic contexts or waste/ceremonial pits.

Differences in practice and meaning were therefore likely between the central fortresses and

the wider region. Jars would not afford direct food presentation or consumption (see Fig. 6-1; Fig. 6-3i). Whether this difference is indicative of local production for local use however is unclear from these data alone, but analyses below do go on to support such a conclusion.

Vessel Type	Pungnab and Mongchon Fortresses (n = 196)	Other Sites (n = 45)
Footed Bowl	6 (3.1%)	1 (2.2%)
Tripod Bowl/Plate	9 (4.6%)	1 (2.2%)
Plate	6 (3.1%)	1 (2.2%)
Bowl – Lidded Bowl	43 (21.9%)	2 (4.4%)
Pot Stand	3 (1.5%)	
Jars	36 (18.4%)	18 (40%)
Lid	93 (47.4%)	22 (48.9%)

Table 6-1: Forms and types of black burnished pottery found on Early Baekje sites within the study area (AD 250-475). Lids are not a vessel type but have been included for reference.

Uncannily, in both areas the ratio of lids to lidded vessel types (i.e. footed bowls, tripods, lidded bowls, jars) is effectively one-to-one (see Table 6-1). Did black burnished lids therefore go with black burnished vessels? Such an assumption appears to be premature. For example, in the large 5th century pit in Pungnab's ritual space, 90.9% of (n = 33) of BBP sherds were from lids, indicating that either lids themselves were directly placed into the pit or such lids accompanied greyware vessels. An interesting possibility, and one that relates to the apparent concern with varied vessel colours mentioned above, is that black burnished lids were paired with greyware vessels and vice versa. Investigating this issue is beyond the scope of the present study, but this association may indicate the use of varied and contrasting colours in Baekje's public ceremonial practice.

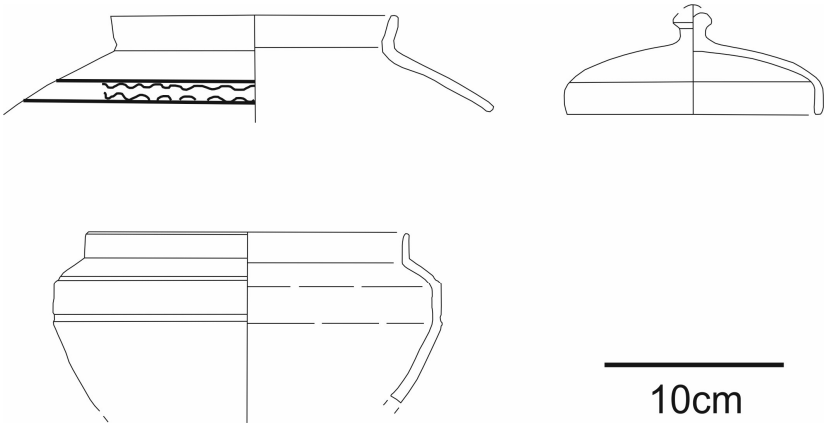


Figure 6-3: The most common forms black burnished pottery in in the study sample; jar (redrawn from NRICH, 2012b: Artefact Figure 926, p.151), lid (redrawn from NRICH, 2012b: Artefact Figure 973, p.154), and lidded bowl (redrawn from N. Lee et al, 2003: Fig. 31-2, p.75).

6-i-ii: Heterogeneous Decorative Styles

One distinctive feature of BBP is their relatively common and varied incised patterns (Lee, 2001: 193), mostly on lids and jars (although such patterns can also be seen on greyware vessels). Decoration and styles may be understood and examined from many perspectives, often depending on the research question (for reviews see Hegmon, 1992; Rice, 2015: 388-410); but in this chapter the pertinent question is whether variation in decoration reflects the organization of BBP production.

Central control over BBP production would be expected to have produced little variation in forms and decorative styles. Costin (1991) has suggested that crafts under state control are likely to produce highly standardized styles. Centralized production would mean fewer potters, homogeneity in available source materials, and standardized routines and styles (Costin and Hagstrum, 1995). If BBP was being produced in central workshops, standardized

pastes, technical styles, forms, and motifs should be apparent in the data.

On the other hand, a multitude of independent makers or production units is likely to lead to a relative heterogeneity in artefact style and decorative motifs (e.g. DeMarrais, 2013a). Heterarchical organization of production would lead to multiple loci of production, be they specialized artisans or people within autonomous households making items for expedient use. In such a case, decorative motifs and vessel forms of BBP would be expected to show high variability (as would technical and compositional features). Local traditions and preferences may also be apparent, as a decentralized production organization would have privileged local consumption and the idiosyncrasies of individual artisans would be more likely to appear.

There will of course be exceptions to these expectations. For example, relative uniformity in styles may derive from narrow consumer expectations, despite a large number of artisans (Costin and Hagstrum, 1995; Costin, 2005: 1066-7). Alternatively, social values emphasizing novelty in designs and/or decoration may also lead to centralized workshops producing relatively varied styles. In both examples however stylistic and compositional data will likely conflict somewhat, with a variety of techniques and sources producing more uniform styles in the former case, and high variation in aesthetic styles underlain by low variation in making techniques and clay sources in the latter. Thus, although stylistic patterns alone are unlikely to give conclusive answers, useful information can be garnered when integrated with the other data discussed in this chapter (*qua* Tite, 1999).

Plog (1980: 41-2) has argued that the classification of decorative designs should be carried out in the same way as the classification of any artefactual type, advocating for what has been termed “hierarchical design structure analysis” (Rice, 2015: 395-8). This type of analysis focuses on identifying fundamental decorative elements and the ways and order through

which they are then modified in a quasi-*chaîne opératoire* approach (Plog, 1980; also Friedrich, 1970). In contrast, ethnoarchaeological studies suggest that design elements considered by potters to be basic or primary are often more complex motifs, not single elements, with the order that single elements are drawn/painted/incised being less significant than final motif form (Hardin, 1983). Sequences may be important when earlier steps constrain the possible next steps (Hardin, 1983: 9), but individual elements are "only the means to create decoration, not the decoration itself" (Braun, 1991: 379).

Arguably then, design motifs are the appropriate units for classification, particularly if they appear regularly and bounded in particular areas of vessels. Here I will try to take a middle of the road approach to classification, focusing on the overall motifs but also recognizing where a hierarchical or *chaîne opératoire* approach is necessary to get to the heart of the significant elements and decorative variation.

One issue for archaeologists is that, in many cases, only ceramic sherds can be used for any analysis. Yet sherds may give a biased view due to differential preservation of particular parts of any vessel type (Plog, 1980: 44-5; Skibo et al, 1989). Unfortunately this situation is unavoidable; the nature of settlement evidence means that much of the ceramic evidence is fragmented. Although Korean excavators do attempt to refit sherds before reporting, time pressure means that only the most obvious refits are likely noticed, therefore double counting (as highlighted Skibo et al, 1989) may be a problem occasionally. Still, considering that stylistic analysis is just one part of a wider analysis, and is likely to offer some insight that complements other approaches, so carrying out such an analysis is worthwhile.

A total of 54 black burnished samples with some form of decoration were identified from the settlements and production sites identified in Chapter 5. Forty samples were discovered at

Pungnab and Mongchon fortresses, while 14 were from sites outside of this central area. The latter set has a low sample number, which is a problem when examining wider trends, especially because the samples are spread among multiple sites and sub-regions within the study area. Despite this issue, the proportion of BBP pieces with decoration at these sites is actually higher than that of the fortresses (28% on sites outside of the centre, 20% for the central fortress sites). As noted above, jars and lids dominate the decorated BBP assemblage, with 87% of samples being from such pieces (excluding three sherds of unknown final form, but that likely came from the bodies of jars).

The most common decorative pattern, positioned around the shoulders of jars and the tops of lids, consists of motifs placed in between two parallel incised lines, sometimes accompanied by rows of impressed dots/triangles either above or below the lines (see Fig. 6-4). This motif form is seen on 80% of samples. The incised lines appear to be the first step in the decoration, with their precision aided by wheel finishing. Traces of wheel use were also observed on some of the BBP samples analyzed below. There may be two sets of these lines, positioned either directly touching (i.e. sharing a 'middle' line) or apart, but in all cases they carry the same internal decorative element (e.g. see Fig. 6-4iii). Relying on sherds means that it would be inappropriate to use the number of lines or decorative bands as a variable because many cases could be missed. The patterns incised between these lines therefore appear to be the most relevant unit of analysis, along with designs that do not fit this characterization. Impressed dots/triangles appear optional, and are varied in positon and overall form, thus will also be examined, but separately.

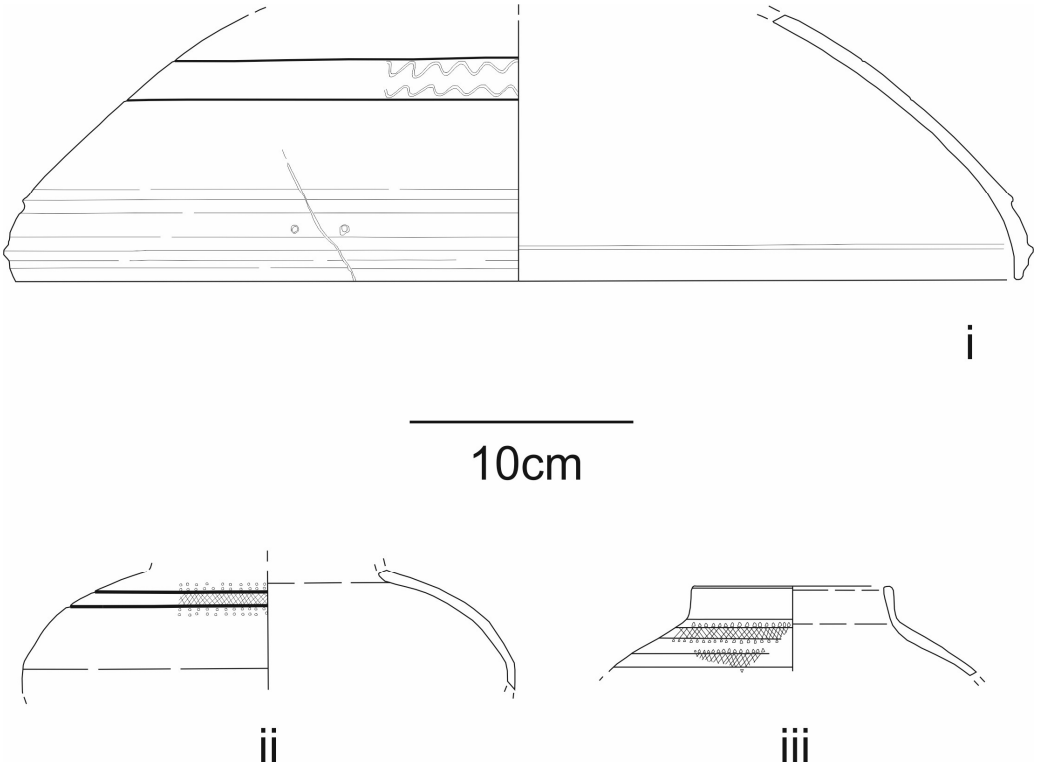


Figure 6-4: Common placements and arrangements of incised decoration on black burnished pottery lids (i – O-Y. Kwon et al, 2004: Fig. 21-4, p.56) and jars (ii – Gyeonggi Cultural Foundation, 2007b: Fig. 9-3, p.42; iii - Gyeonggi Cultural Foundation, 2011: Fig. 6-8, p.36), including examples with impressed decorations.

Five basic motifs occurring between lines can be identified, with bands of zig-zag/wavy lines and cross-hatch being the most common (Table 6-2; Fig. 6-5). Combined, these two core motifs make up two-thirds of examples. Yet there is variation within this category also, both in terms of the number of zig-zag/wavy lines and in the placement of bands in relation to each other. As noted above, cases with two bands may have them touching, sharing a line, or have them placed apart from one another (see Fig. 6-4). Multiple other decorative motfis can be identified, both within lines and motifs unrelated to any lines/bands (Fig. 6-5), underlining

further a heterogeneity within the BBP assemblage. The makers of BBP thus had certain core motifs that were presumably socially significant and widely expected, but were also flexible in terms of the exact details and how these motifs were positioned.

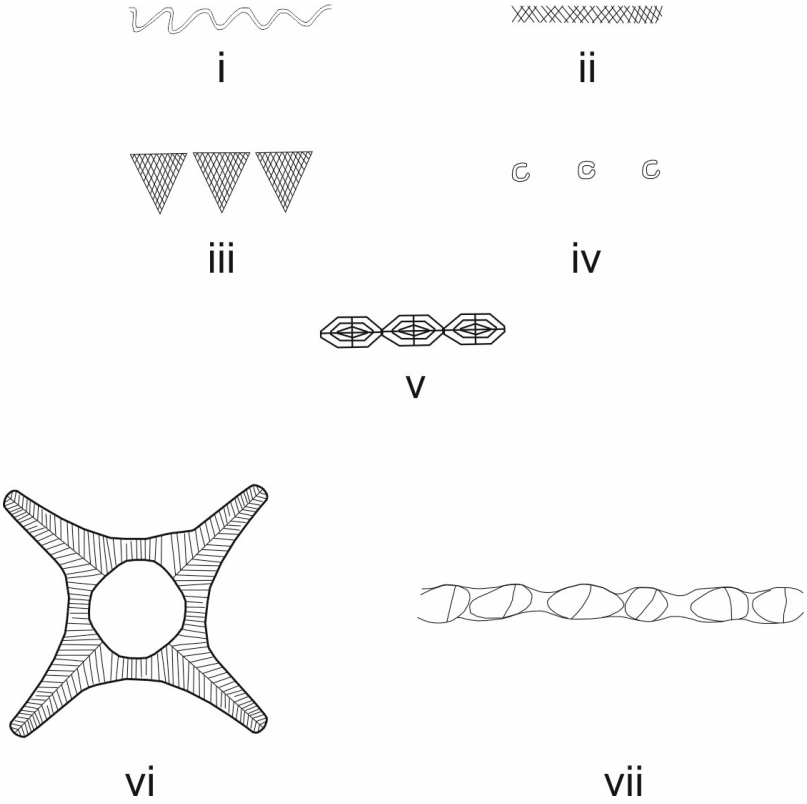


Figure 6-5: Common decorative motifs found on black burnished pottery. Most are found in bands around the circumference, between parallel incised lines: (i) zig-zag/wavy line, (ii) cross hatch, (iii) cross-hatch triangles, (iv) impressed dots, (v) 'diamonds'. Others are not: (vi) feather pattern (on lids with the lid handle in the centre), (vii) band of 'studs' (made by carving out some of the vessel surface).

A significant proportion of cases utilize other decorative motifs, a number of which are unique in the (albeit limited) dataset. A strong degree of freedom for artisans is therefore arguable here. Such freedom would not necessarily preclude some form of state or centralized

control over production though; exclusive state patronage of multiple artisans and/or the valuing of novelty in design for example. Finally, it must be noted that the existence of two core motifs (zig-zag/wavy line and cross-hatch) may be some function of time, whereby some late 4th-to-5th century contexts at Pungnab and Mongchon have concentrations of items with some form of zig-zag/wavy line. However other 5th century contexts have concentrations of BBP with cross-hatch, indicating significant temporal overlap in the use of these motifs. Wider study would be needed to establish anything more.

Pattern		Pungnab and Mongchon Fortresses (n = 40)	Other Sites (n = 14)
Zig-Zag / Wavy Line	One	5	1
	Two	10	2
Cross-Hatch	Cross Hatch	13	4
	Diagonal Lines		1
Cross-Hatch Triangles	Point 'Up'	2	
	Point 'Down'	1	1
Stamped Circles			1
Diamonds		1	
Ridge with Carved 'Studs'		3	
Feather Pattern		1[3]	2
Lotus / Flower		1	
Rows of Dots		1	
Other (e.g. lines only, pattern from paddling)		2	2

Table 6-2: Types of incised decoration seen on black burnished pottery from Early Baekje (AD 250-475) settlements and production. Those in bold appear in bands around the whole circumference, between two incised lines.

The distributions of motifs discussed above do not obviously reveal any regional distinctions

[3] Sherd also includes a band with cross-hatch.

that would indicate a decentralized or expedient production system. However, the forms of optional impressed decoration (e.g. see Fig. 6-4ii) *do* highlight a difference between the central fortress sites and other sites. Only two of the Pungnab/Mongchon examples have any of this extra decoration (i.e. 5%), whereas half (seven of 14 samples) of decorated sherds from other sites have added impressed patterns. Five of these seven are from settlements in the Yongin area, and all are different. The other two are from the Wadong-ri village in the far west of the study area, where two sherds from different contexts have the same impressed pattern. While sample sizes are low, it appears that artisans outside the central area (at least in the two sub-regions highlighted) may have been independently adopting central styles and embellishing them, along with the innovation in overall motif types seen above. It cannot be said how intense the BBP production was outside of the centre based on this data alone, but the compositional analyses below sheds some light on the issue.

6-i-iii: Analysing Surface Finish and Firing Atmospheres through Surface Colour

The utility of using the Munsell Chart to examine ceramic surface and section colours has been discussed by Rice (2015: 278-290). She notes that the colour of fired ceramic is the product of several variables, most obviously issues of firing (time, atmosphere, temperature). Atmosphere is a key factor because only after organic material is oxidized and eliminated can iron content, a primary determinant of colour (at least for lower temperature firings), play a significant role in colour determination (Rice, 2015: 278-282). In a reducing (or not fully oxidizing) atmosphere ceramic section cores remain darker due to carbon deposition, or the entire section will remain dark/black (see petrographic analysis below). Luckily, Korean excavation reports often report ceramic colours using the Munsell Chart, although reportage is patchy in older reports. It would therefore be worthwhile to analyze this dataset, as regional differences highlighting different firing practices would again point to a more distributed or

decentralized BBP production pattern.

	Black or Dark Grey	Grey or Other Lighter Colour
Pungnab (n = 194)	136 (70.1%)	58 (29.9%)
Outside Pungnab (n = 45)	41 (91.1%)	4 (8.9%)

Table 6-3: Outer surface colours of black burnished pottery from Early Baekje (AD 250-475) settlements and production sites.

	Black or Dark Grey	Grey or Other Lighter Colour
Pungnab (n = 194)	123 (63.4%)	71 (36.6%)
Outside Pungnab (n = 33)	29 (87.9%)	4 (12.1%)

Table 6-4: Inner surface colours of black burnished pottery from Early Baekje (AD 250-475) settlements and production sites.

Data is available for Pungnab[4] and various sites outside of the Pungnab-Mongchon area, although reportage is variable. In the case of both outer surface (Table 6-3) and inner surface (Table 6-4) colours Chi-Squared tests reveal a highly statistically significant interaction between colour and area[5]. In other words, surface colours differ between Pungnab and sites in the wider region. In the wider region BBP sherds are almost exclusively black or dark grey, whereas a significant proportion of examples from Pungnab are grey (in Munsell's terms). In

[4] No relevant data is reported for Mongchon samples.

[5] Outer Surface Colour (df. 1, n = 239, Chi = 8.391, p = 0.004); Inner Surface Colour (df. 1, n = 227, Chi=7.637, p=0.006).

contrast, core colours show no significant difference between Pungnab and regional sites (Table 6-5)[6]. The majority of sherds show lighter core colours, often brownish, indicating that most would have been fired in an oxidizing atmosphere (as noted by Nam and Kim, 2014).

	Dark (black, dark grey)	Lighter (lighter grey, brown, red-brown, yellow-brown)
Pungnab (n = 194)	31 (16.0%)	163 (84.0%)
Outside Pungnab (n = 32)	4 (12.5%)	28 (87.5%)

Table 6-5: Core colours of black burnished pottery from Early Baekje (AD 250-475) settlements and production sites.

The range of firing atmospheres therefore appears to have been quite consistent throughout the study area, with a significant minority of cases apparently fired in reducing or incompletely oxidized atmospheres. The differences in surface colours consequently likely derive from different surface treatments or varied strategies in smudging the vessels and/or use of pigments (e.g. kiln sizes, vessel placements, types of organics used, temperature and length of exposure). Such differences again point to BBP production taking place away from the central fortresses. Yet a firm conclusion is elusive, consumer choice in the wider region may have been geared towards darker surface colours, causing selection bias.

6-i-iv: Centralized Heterogeneity or Decentralized Production?

Unequivocal conclusions about the nature of BBP production in Early Baekje cannot be made through analysis of black burnished vessel forms, decorative styles, and vessel colours alone.

[6] Section Core Colour (df. 1, n = 226, Chi=0.254, p=0.641).

Multiple interpretations are possible; however the available data do constrain possible or plausible scenarios. It is possible that production was distributed throughout the study area, with different forms having different local significances, local decorative styles, and distinct surface treatments. Alternatively, centrally organized patronage of multiple production units with quite high autonomy over the techniques and styles used in BBP production is an option. Particular consumer expectations and preferences for certain forms, styles, and colours may then have shaped the patterns discussed above.

An important point even in this latter scenario is that artisans or production units had a degree of independence in what they made and how they made it. More crucially, regional sites appear unlikely to have been fully subordinate to the leadership of main fortresses. Regional actors or authorities would have been selecting the types they wanted, or the central authority were having to distribute what regional actors preferred rather than gifting them standardized items.

Caveats remain however; sample sizes outside of Punganb and Mongchon fortresses are low, and similar decorations and forms are seen in Baekje greyware. Firmer and more generalizable conclusions would therefore need analysis of both BBP from non-settlement contexts and include other vessel wares. Still, the following petrographic and compositional analyses of black burnished pottery sherds allow a further narrowing down of the possibilities regarding the organization of the ware's production and distribution.

6-ii – Petrographic analysis

Twenty-two black burnished sherds from six sites were selected for petrographic and elemental analysis (Table 6-6). The sites were distributed throughout the study area, although one site, Juweol-ri, was situated outside the study area on the Imjin River to the north (Fig. 6-

6). Juweol-ri was a small settlement site excavated in the 1990s, with architectural and material styles consistent with LIA and Early Baekje sites. Reported radiocarbon dates places activity on the site as late 3rd to 5th century (Lee and Kim, 1999). Other sites have been discussed extensively above (Ch. 5), although Gorimdong was not included in the previous analyses. This village site had over 30 houses of the LIA-Early Baekje tradition, a number of which contained characteristic Baekje Pottery, BBP vessels, Chinese pottery, and beads (see Koo, 2009; Lee and Lee, 2016). In the context of the discussion in Chapter 5 Gorimdong village was clearly a significant place during Early Baekje. The site spanned the transition from the Late Iron Age to Baekje, so the black burnished samples from here provide crucial evidence for examining the development of BBP production and distribution.

Site	Samples for Analysis
Pungnab Fortress	PN1-PN9
Mongchon Fortress	MC1-MC3
Gorimdong	GR1-GR2, GR4-GR6
Misa-ri	MS1-MS2
Myeokjeolsan Fortress	MJ1
Juweol-ri	JW2-JW3

Table 6-6: Samples of black burnished pottery subjected to petrographic and geochemical analysis, their codes, and their site of origin.

Thin sections were examined using a polarizing light microscope in the Department of Archaeology, University of Cambridge. Thin sections were grouped and described using the

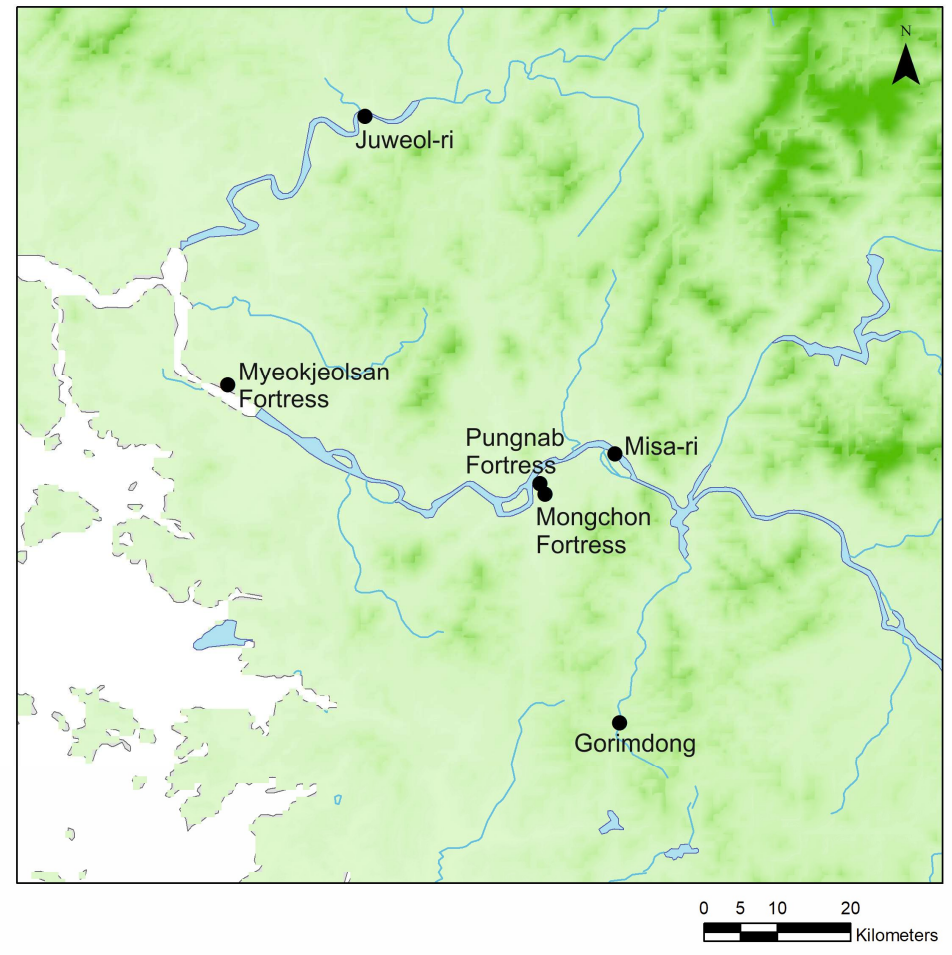


Figure 6-6: Early Baekje (AD 250-475) Sites from which black burnished pottery samples were obtained for petrographic and compositional analysis.

method detailed by Quinn (2013)[7]. Samples were examined under both plain polarized light (PPL) and cross-polarized light (XP), being separated into fabric classes based upon the nature of their aplastic inclusions, clay matrix, voids, and textures. Descriptions of each fabric's most important characteristics are given here. Interpretations of technological features identifiable via thin section analysis are also given where identifiable.

6-ii-i: Slide Preparation

Due to the rarity, fragility and relatively small sizes of the samples researchers with more technical expertise and experience prepared the thin sections used in this analysis. The nine samples from Pungnab Fortress were prepared in the Charles McBurney Laboratory for Geoarchaeology, University of Cambridge by Dr. Tonko Rajkovaca. The remaining 13 slides were made in the private laboratory of Dr. Patrick Quinn. After making a fresh section with a circular saw, the sherds were impregnated in epoxy resin and mounted on glass slides. Samples were then ground to 30μm, confirming the thickness via examination of the thin section under cross-polarized light (XP) with a polarizing light microscope (for more details see Appendix 2).

6-ii-ii: Four Broad Ceramic Fabrics[8]

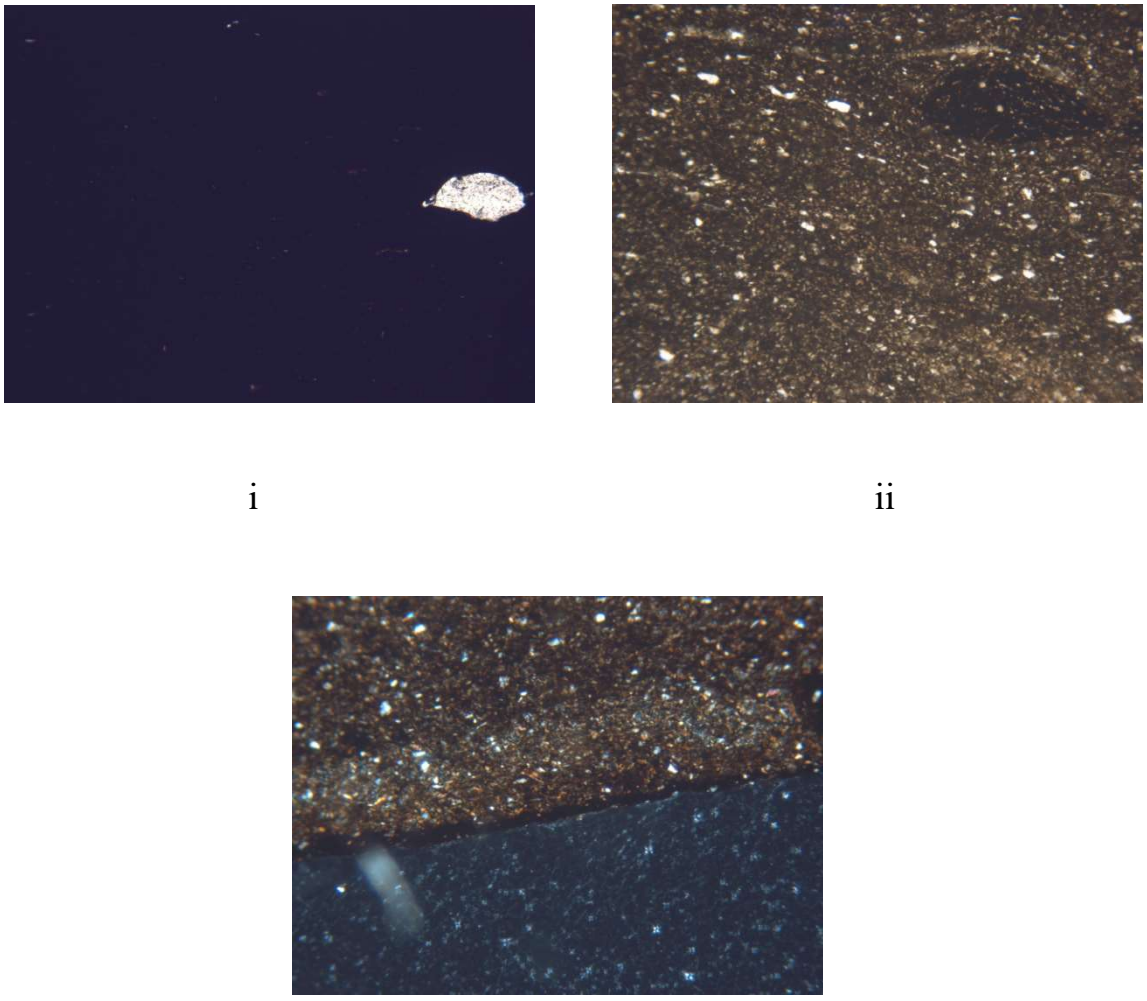
Very Fine Fabric - (i) PN3, PN7 (ii) JW2, JW3 (iii) GR4, GR5

A very fine paste with no or very rare small-medium sized inclusions of quartz/recrystallized quartz characterize this fabric. Three subgroups have been identified. The first shows firing in

[7] Quinn's (2013) method for categorization is a modification of that proposed by Whitbread (1995: 379-88).

[8] See appendix 3 for microphotographs of all thin sections.

a fully reduced atmosphere (Fig. 6-7i). The second is porous, showing evidence of clay mixing and firing in an incompletely oxidizing atmosphere (Fig. 6-7ii). The final sub-group is porous and was fired in an oxidizing atmosphere, with one sample (GR5) nicely showing evidence of the plant-ash coating discussed above (Fig. 6-7iii).



i ii

iii

Figure 6-7: Very Fine Fabric subgroup examples; (i) sample PN7 – PPL x40 magnification, (ii) sample JW3 – PPL x40 magnification, (iii) sample GR5 – XP x40 magnification (note the layer of black on the surface).

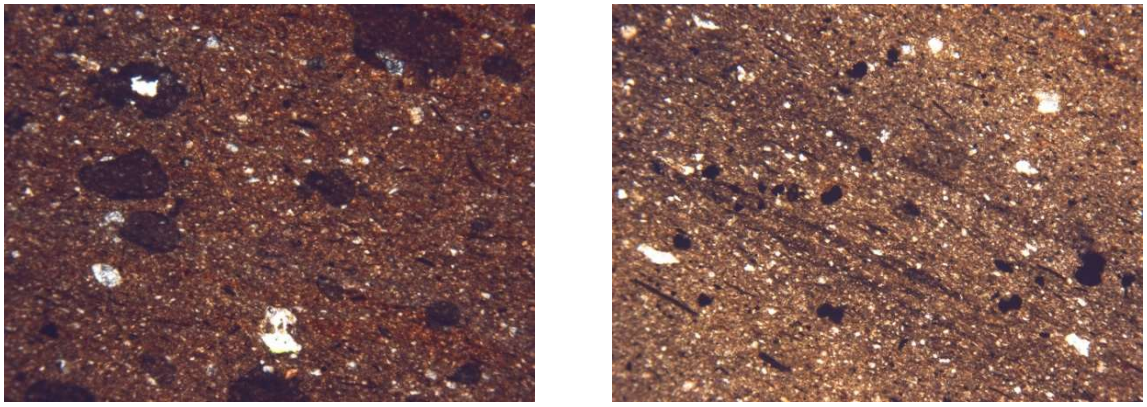
Samples vary in the optical activity of their matrixes; some are weakly active while others are optically inactive. The former were therefore likely fired at a temperature under 850ºC, while the latter were fired at a temperature above 850ºC[9]. Subgroups (ii) and (iii) each have examples of both.

Fine Fabric with Clay Pellets - (i) PN1, PN2, PN5, PN8, MS1 (ii) MJ1

This group is characterized by a light brown-red matrix that contains relatively abundant small-medium sized rounded clay pellets. Colour difference indicates these pellets are of a different composition from the matrix (Fig. 6-8i). The rounded nature of the clay pellets suggests that they are natural occurrences rather than intentionally added as temper (Quinn, 2013: 168-71). In all cases there is also a rock component, made up of uncommon small to medium-sized sub-angular quartz/recrystallized grains. Both quartz and clay pellet inclusion types are poorly sorted. Their origin may be from clay mixing, evidenced by clearly visible streaks of clay with a different composition (see Fig. 6-8ii).

The fabric with clay pellets may be divided into two subgroups based on the presence of what appears to be ferruginous material (see black flecks in the examples shown in Fig. 6-8). This material is present in subgroup (i) and absent in subgroup (ii). In subgroup (i) a majority of these flecks align with the pots' surface, and thus may be taken as evidence of wheel use during some stage of manufacture.

[9] The sintering and vitrification of clay minerals that occurs at higher firing temperatures means that, as a general rule, minerals in the clay matrix lose birefringence (optical activity) when fired over 800-850ºC (Quinn, 2013: 190-1).



i ii

Figure 6-8: Examples of the Fine Fabric with Clay Pellets; (i) sample PN1 – PPL x40 magnification, (ii) sample PN5 – PPL x40 magnification (note the streaks from clay mixing).

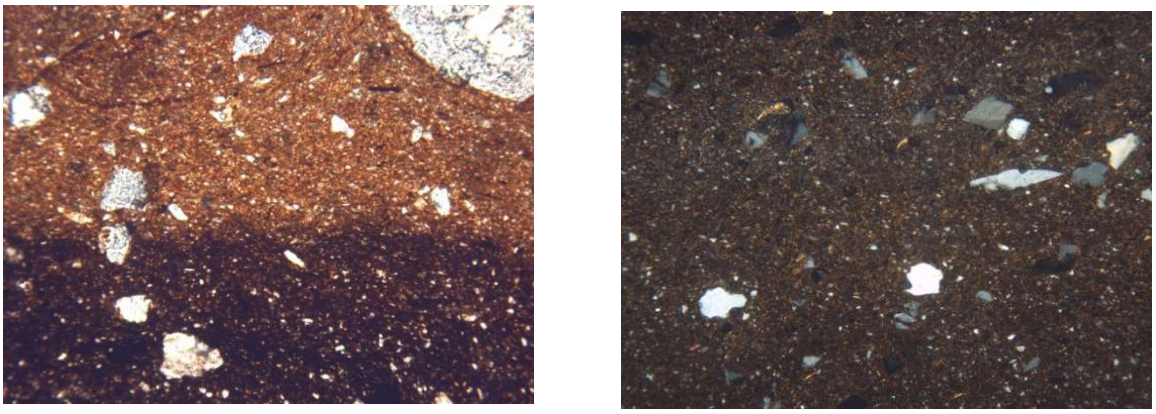
The brown-red matrix indicates firing in an oxidizing atmosphere. Weak-moderate optical activity in the matrix indicates firing temperatures below 850ºC.

Medium-fine Gneiss-type Fabric

- (i) PN6, MC2, MC3, MS2, GR1, GR2 (ii) PN4, PN9, MC1

This fabric is characterized by relatively abundant small-medium inclusions derived from metamorphic rock, most likely gneiss due to the situation of the settlements on the expansive Gyeonggi Gniess Complex[10] (Fig. 6-9). Abundant, poorly sorted angular or sub-angular small-medium sized quartz/recrystallized quartz, accompany rare elongate sub-angular biotite mica grains. Rare small, medium, or large sized fragments of metamorphic rock (gneiss) are also present. A moderate abundance of small-medium sized pores is common.

[10] See Appendix 4 for details of the study area's geology.



i ii

Figure 6-9: Examples of the Medium-fine Gneiss-type Fabric; (i) sample PN4 – PPL x40 magnification, (ii) sample GR1 – XP x40 magnification.

The angularity and bimodal distribution of the rock-derived inclusions (i.e. the fact that there are little-to-no intermediate sizes between tiny silt sized grains and small-medium sized mineral/rock inclusions) suggests that larger grains were introduced to a paste that had already been levigated. Introduction may be via addition of temper or through clay mixing, the latter of which characterizes subgroup-(ii). Clay mixing is identified via visible streaks of clay with a different composition. Poorly sorted medium-sized clay pellets are also visible. As with the fabric described above, their irregular shapes suggest these nodules are the result of mixing rather than natural occurrences.

The majority of samples have a red-brown or lighter grey coloured matrix, indicating firing in an oxidizing atmosphere. However, a third of cases were reduced fired. The optical activity of samples' matrixes also varies. As with other fabrics therefore, firing temperatures appear variable within the group, some above 850ºC and some at or below that temperature.

Fine Mica-rich Fabric - GR6

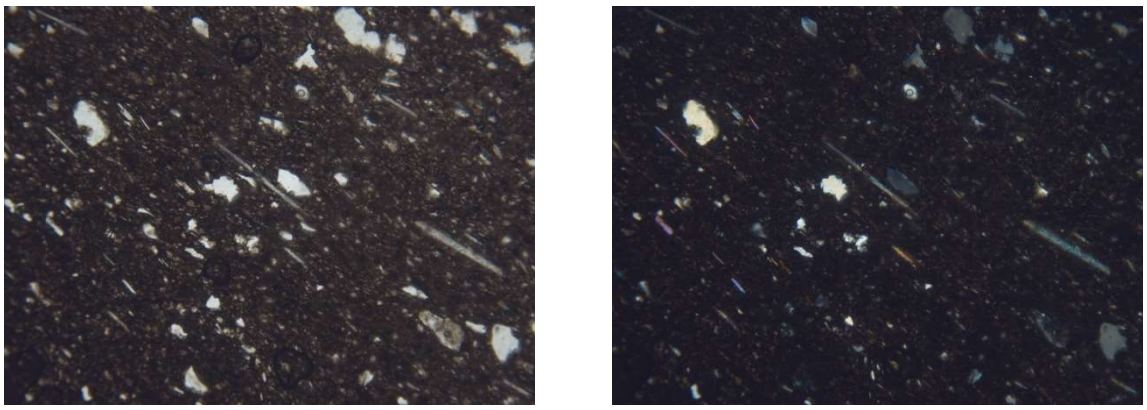


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Figure 6-10: Fine Mica-rich Fabric; sample GR6 (i) PPL x40 magnification, (ii) XP x40 magnification.

This fabric is characterized by moderately abundant evenly sorted small inclusions of muscovite mica and relatively rarer biotite mica (Fig. 6-10). These inclusions are characteristically elongate and sub-angular-rounded on the edges. Their origin is therefore likely natural, likely derived from the schists that characterize the geology of the southwestern part of the study area (see Appendix 4). Rare small equant sub-rounded quartz/recrystallized quartz inclusions are also present. The matrix is slightly porous, with pores of small-to-medium size. The very dark brown-red to black matrix suggests that the pot was fired in a reducing atmosphere. The matrix remains very weakly optically active, so firing temperature was likely at or just below 850ºC.

6-ii-iii: Mineral and Technological Heterogeneity

Heterogeneity in both the materials and methods used characterizes the manufacture of BBP,

with four identifiable broad fabrics from just 22 samples (and eight groups and subgroups in total). This variation is not simply a function of the settlement at which the vessels were used and ultimately deposited; Pungnab fortress, Misa-ri village, and Gorimdong village each have examples of two or three different ceramic fabrics. For example, at Pungnab the Fine Fabric with Clay Pellets is highly likely to be from a different source from those of the Medium-fine Gneiss-type Fabric, where ferruginous nodules are absent (although some clay sources can be internally heterogeneous; see Arnold, 2000). The same applies to the Mica-rich Fabric versus others from Gorimdong.

Variability in technical features also appears to be a feature common *within* fabric groups, particularly pertaining to the way manufacturers were firing their vessels. Both firing atmospheres and firing temperatures were highly varied in two of the identified fabrics (Table 6-7), and reduction or incompletely oxidizing firing atmospheres appear more common than suggested by the colour analysis above. Here, nine of 22 samples, or 41% of cases, were fired in such atmospheres, which is, proportionally, more than two and a half as many as identified in the analysis of colour above (15.5%). The presence of such heterogeneity is in line with recent studies highlighting the varied strategies potters used to make, colour, and fire BBP (Cho, 2006; Kim et al, 2017).

Multiple artisans supplying certain individual sites therefore appear to have been utilizing multiple raw material sources (although what constitutes a clay source may vary – see section 6-iv-i), different paste recipes, and variable firing strategies. The evidence thus supports one of the scenarios outlined above, where multiple independent groups of artisans were producing BBP at different places throughout the Han River basin. Local variation in styles was thus likely derived from local tradition and preferences rather than a central strategy.

Petrographic Group	Sample	Firing at <850ºC	Firing at >850ºC	Reducing or Partially Reducing Atm.	Oxidizing Atm.
Very Fine Fabric	PN3		■	■	
	PN7		■	■	
	JW2		■	■	
	JW3	■		■	
	GR4	■			■
	GR5	■			■
Fine with Clay Pellets	PN1	■			■
	PN2	■			■
	PN5	■			■
	PN8	■		■	
	MS1	■			■
	MJ1	■			■
Medium-Fine Gneiss-type	PN6	■		■	
	MC2		■	■	
	MC3	■			■
	MS2	■			■
	GR1		■		■
	GR2		■		■
	PN4		■	■	
	PN9		■		■
	MC1		■		■
Fine Mica – rich	GR6		■	■	

Table 6-7: Variations in firing techniques within and among fabric groups.

The following elemental composition analysis will be able to shed further light on whether particular sources were associated with particular settlements or manufacturing strategies. Sources localized to particular settlements would indicate production at or near that settlement, or an exclusive relationship between residents and the artisans. If particular sources are instead associated with certain technical strategies it would likely have been the case that autonomous artisans were supplying residents from multiple settlements. The

picture of Early Baekje social organization would change depending on which scenario was the case.

6-iii – Instrumental neutron activation analysis (INAA)

The same 22 samples examined petrograpically were characterized chemically using Instrumental Neutron Activation Analysis (INAA), which was carried out in the Oregon State University (OSU) Archaeometry Laboratory using their routine procedures (see Minc and Sterba, 2017). This number of samples is thus at or above the recommended lower limit, suggested to be 15-20 samples of the same ceramic type for a statistically significant analysis (Tite, 1999; Arnold, 2000: 366). Following surface cleaning[11], around one gram of homogenized powder was prepared from each ceramic sample. From this bulk, 250mg samples were measured into high-purity polyethylene vials and exposed to the OSU TRIGA reactor for irradiation. In every irradiated batch three replicates of standard reference material NIST1633a (coal fly ash) and one of NIST688 (basalt) were included for direct comparison with the samples, allowing the conversion of any sample's γ-radiation emission activity to elemental concentrations (of ppm). Single replicates of NIST1633a (coal fly ash) and New Ohio Red Clay (NORC) were also included as standards to assess the accuracy and precision of results.

Two exposures were carried out. The first lasted 20 seconds, and after a 22 minute decay elements with short-intermediate half-lives were quantified via a High Purity Germanium (HPGe) radiation detector, measuring the characteristic spectrum of γ -radiation emitted by

[11] Surface cleaning with a tungsten carbide burr or rotary file removes any surface pigment, thus any plant ash colorant on the sherd's surface will not have affected the subsequent elemental characterization.

the sample (Glascock et al, 2004; Minc and Sterba, 2017). The second exposure was a 14 hour irradiation, and two counts were subsequently taken, the first after six days and the second after four weeks. Concentrations from 34 elements were obtained for each sample as a result.

Twenty-nine of the 34 elements for which concentrations (ppm) were detected have been used in the subsequent analysis[12]. Potassium (K) is omitted due to a high percentage difference (-10.3%) between the detected concentration from the standard samples and the known concentration. Data for K is therefore likely to be inaccurate and/or imprecise. In addition, Sr, Gd, Br, and Ni are excluded because at least one sample yielded no result for one or more of those elements. Due to the sample size it is judged better to omit the elements rather than the samples.

Two methods of standardization and multiple statistical approaches were used to analyse the elemental concentrations. Logarithms ($\log_{10}$) are a common method of standardizing data from INAA (e.g. Weigand et al, 1977; Arnold et al, 1991; Neff, 2002: 16-17; Glascock et al, 2004; Minc et al, 2016), where average concentrations for individual elements may range from 0.1ppm to over 100,000ppm. Average-group linkage cluster analysis is often used to differentiate compositional groups (e.g. Weigand et al, 1977; Quinn et al, 2010; Day et al, 2011; also Neff, 2002: 21-8), and Principal Component Analysis (PCA) is another frequent tool for identifying compositionally similar groups (Neff, 2002: 19-21; Glascock, 2004). Although sticking to commonly used methods is likely to yield acceptable results, Neff (2002) recommends exploring compositional data through varied avenues, whereby repeated replication of the same results with different approaches solidifies the likely real-world

[12] Appendix 5 provides the full INAA dataset.

existence of such groups. For this reason I have also employed cluster analysis using Ward's method, which creates the most homogenous groups possible and is thus useful in trace element analysis (Shennan, 1997: 241-5). Finally, in addition to $\log_{10}$ data I have standardized each element to their means[13], as recommended by Walsh (2017: 47-8), whereby each element is placed on the same scale.

6-iii-i: Cluster Analysis

Four cluster analyses were carried out in total[14], and four generally consistent chemical composition groups with particular regional and site associations can be identified in each (see Fig. 6-11). Although some individual members of each group vary, there is a high degree of overlap and regularity among the analyses (Table 6-8). Groups 1 and 2 are strongly associated with settlements situated on or north of the Han River, with Group 2 consistently dominated by BBP from the two core fortresses, Pungnab and Mongchon. Group 3 always contains the same four samples from Gorimdong, even when other group members vary.

[13] I.e. each sample's element concentrations are divided by the overall mean of their respective element.

[14] In all cases squared-Euclidian distance was used as the distance measure because it gives greater weight to elements with high variance (Neff, 2002: 21-8), and is thus ideal for highlighting meaningful differences.

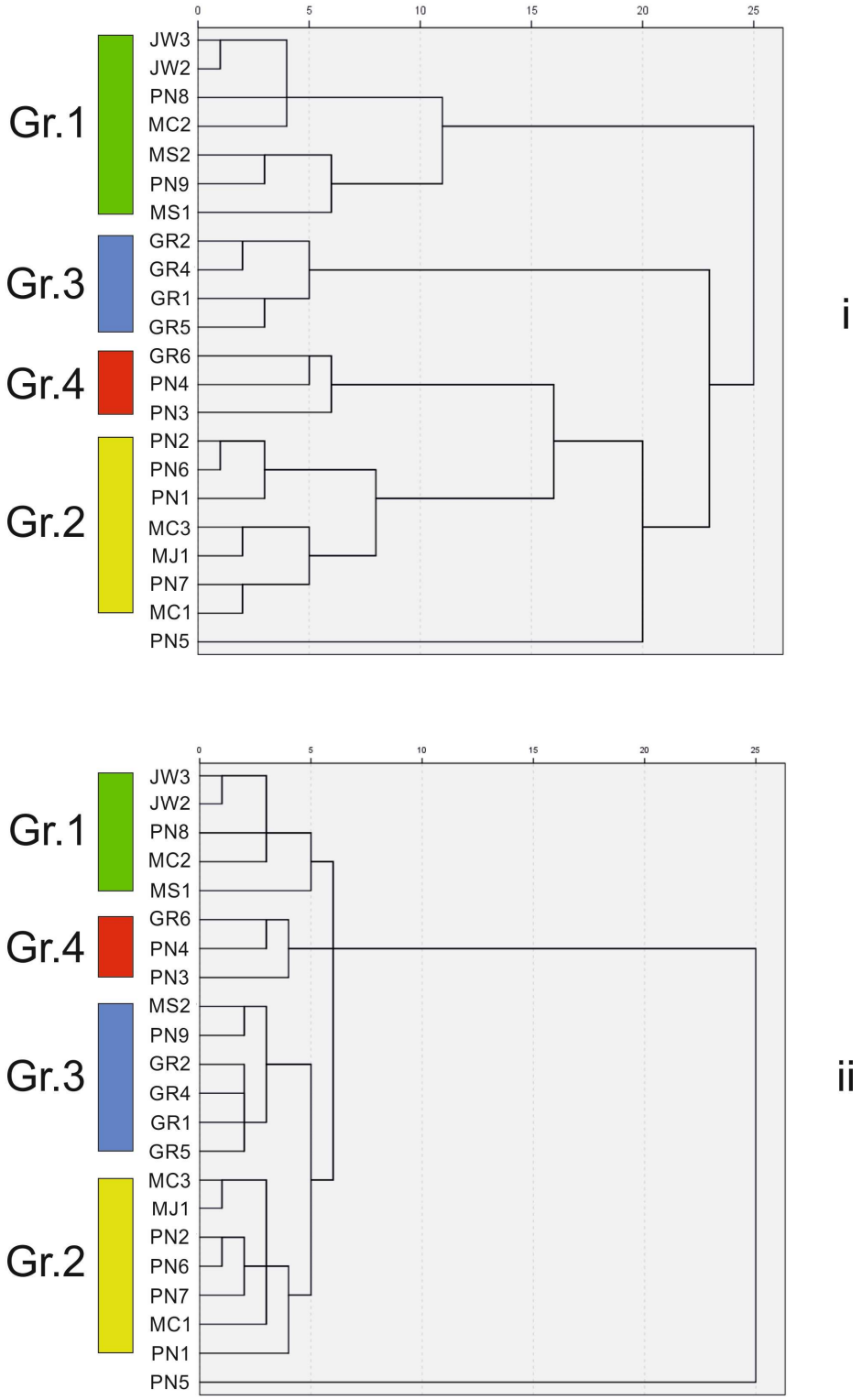


Figure 6-11: Two results of Cluster Analysis on the elemental concentration data; (i) using Ward's method on $\log^{10}$ data, (ii) using the average-linkage method on data standardized to elemental means.

Indeed, these four samples cluster together tightly even when nested within a broader group (see Fig. 6-11ii). The only group that has consistent membership across all analyses is Group 4; considering the presence of the Mica-rich fabric in this group it is likely associated with a location in the south/southwest of the study area, away from the Han River basin.

	Average-Linkage	Ward's Method
Group 1	JW2, JW3, PN8, MC2, MS1	JW2, JW3, PN8, MC2, MS2, PN9, MS1
Group 2	PN2, PN6, PN1, PN7, MC1	PN2, PN6, PN1, MC3, MJ1, PN7, MC1
Group 3	MC3, MJ1, PN9, GR2, GR4, GR1, GR5, MS2	GR2, GR4, GR1, GR5
Group 4	GR6, PN3, PN4	GR6, PN3, PN4

	Average-Linkage	Ward's Method
Group 1	JW2, JW3, PN8, MC2, MS1	JW2, JW3, PN8, MC2, MS1
Group 2	MC3, MJ1, PN2, PN6, PN7, MC1, PN1	PN7, MC1, PN2, PN6, PN1
Group 3	MS2, PN9, GR2, GR4, GR5, GR1	GR2, GR4, GR5, GR1, MC3, MJ1, MS2, PN9
Group 4	GR6, PN3, PN4	GR6, PN3, PN4

Table 6-8: Chemical groups identified by various cluster analyses. Above is from the log10 data, and below is from the data standardized to elemental means. *N.B.* PN5 as an extreme outlier in all the results, and thus does not appear in the tables.

6-iii-ii: Principal Components Analysis (PCA)

Principal Components Analysis is a means to reduce the complexity of datasets with large numbers of variables. The $\log_{10}$ elemental data can be reduced to three axes that cumulatively account for 67.6% of the variation within the dataset; Factors 1, 2, and 3 account for 37.3%, 17.8%, and 12.5% of that variation respectively. Factors have significant correlations with particular elements (Fig. 6-12), and each thus reflects most strongly the variance within those

particular elements[15]. All of the elements with the strongest correlations to each factor have concentrations under 200ppm, and thus may be considered as trace elements (all but one have concentrations under 100ppm). Trace elements in clays are effectively accidental, and so provide the best information for provenance studies (Glascock et al, 2004: 96), boding well for the significance of the results here. PCA on the elements standardized to their means gives virtually identical results, three axes accounting for 67.2% of the variation and identical sample groupings; only $\log_{10}$ will thus be presented here.

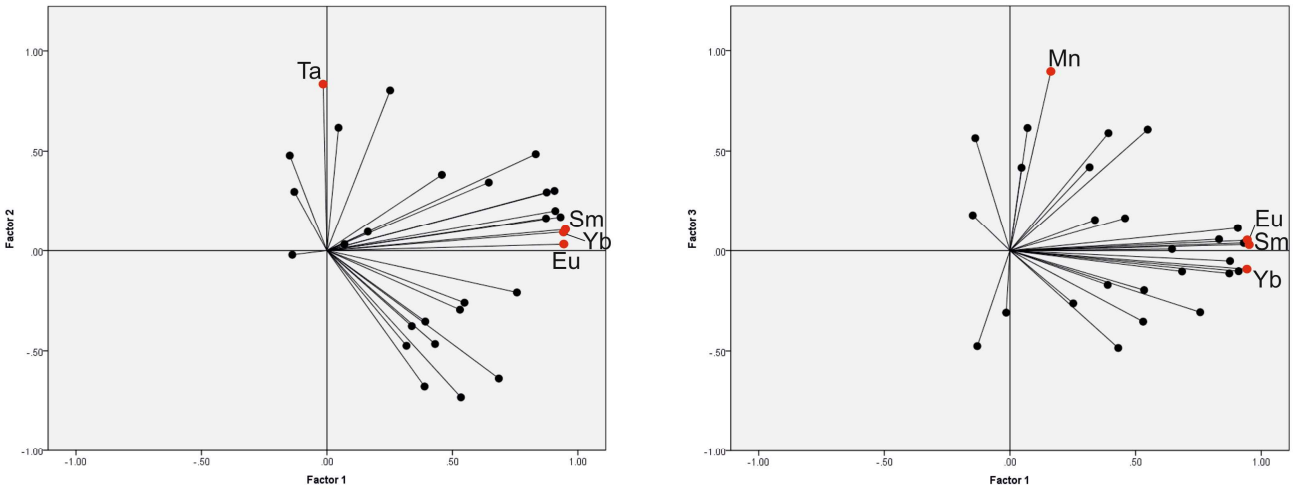


Figure 6-12: Loading plots of (i) PCA Factors 1 and 2, and (ii) PCA Factors 1 and 3, highlighting key elements that correlate most tightly with each factor.

Four broad groups may be identified; although certain groups become more or less obvious depending on which PCA factors are examined (see Fig. 6-13). These groups broadly concur with those obtained through the cluster analyses, particularly PCA groups 2, 3, and 4 (Table 6-9). Group 1 is an exception, containing cases that varied in their group membership above;

[15] For full numerical data on each Factor's loadings see Appendix 6.

PCA Group	Sample	Cluster Analysis Group(s)	Petrographic Group	Firing Temperature	Firing Atmosphere
1	PN1	2	Clay Pellets	Lower	Oxidizing
	PN2	2	Clay Pellets	Lower	Oxidizing
	PN5	-	Clay Pellets	Lower	Oxidizing
	PN6	2	Gneiss-type	Lower	Reducing
	PN9	3 / 1	Gneiss-type	Higher	Oxidizing
	PN8	1	Clay Pellets	Lower	Reducing
	MJ1	2 / 3	Clay Pellets	Lower	Oxidizing
	MC3	2 / 3	Gneiss-type	Lower	Oxidizing
	MS2	3 / 1	Gneiss-type	Lower	Oxidizing
2	GR1	3	Gneiss-type	Higher	Oxidizing
	GR2	3	Gneiss-type	Higher	Oxidizing
	GR4	3	Very Fine	Lower	Oxidizing
	GR5	3	Very Fine	Lower	Oxidizing
	PN7	2	Very Fine	Higher	Reducing
	MC1	2	Gneiss-type	Higher	Oxidizing
3	JW2	1	Very Fine	Higher	Reducing
	JW3	1	Very Fine	Lower	Reducing
	MS1	1	Clay Pellets	Lower	Oxidizing
	PN3	4	Very Fine	Higher	Reducing
	MC2	1	Gneiss-type	Higher	Reducing
4	GN6	4	Mica-rich	Higher	Reducing
	PN4	4	Gneiss-type	Higher	Reducing

Table 6-9: Chemical groups identified via Principle Components Analysis and their constituent samples. Samples' Cluster Analysis groups, petrographic fabric groups and information on their firing strategies are also presented.

although membership of Cluster groups 2 and/or 3 is most common.

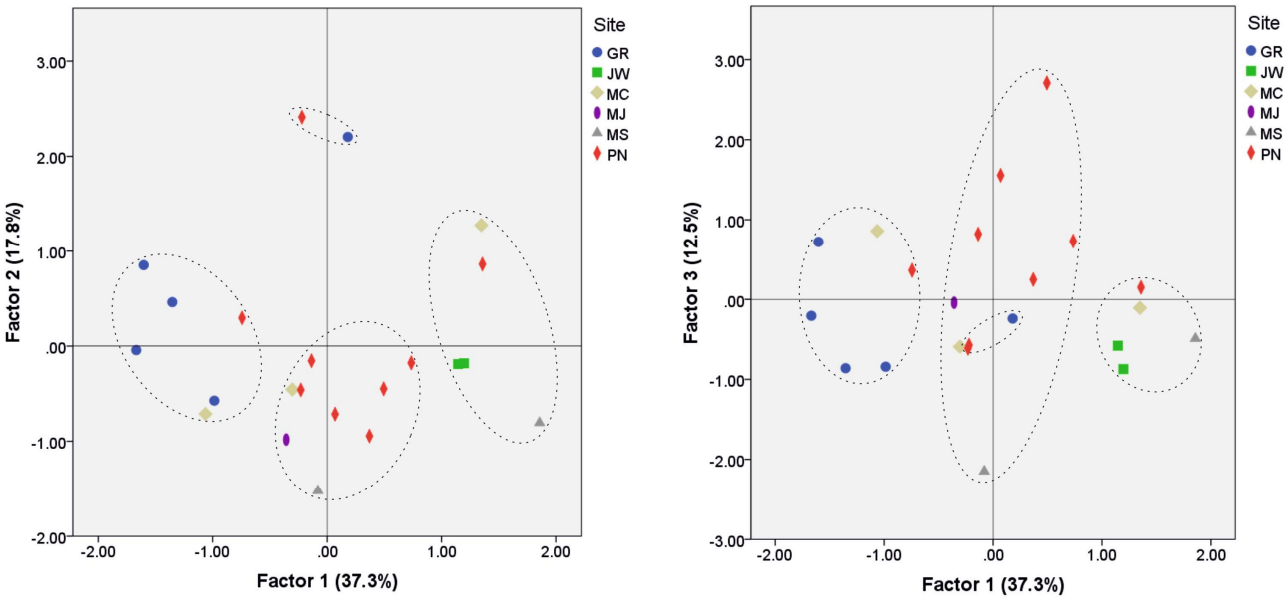


Figure 6-13: Plots of Principal Components Analysis Factors 1 and 2 (left), and 1 and 3 (right) presenting suggested chemical groups. Circles represent suggested chemical groups.

6-iv – Implications: Multiple Sources, Decentralized Production

6-iv-i: Diverse Yet Localized Raw Sources

That four generally consistent chemical groups can be identified via multiple statistical approaches indicates that four distinct sources were used to make the BBP assemblage sampled here. Furthermore, these chemical groups have obvious biases towards particular sites or regions of the study area (see Table 6-9; Fig. 6-14). One group is primarily made up of BBP sherds from Pungnab and Mongchon fortresses (PCA group 1, Cluster Group 2), i.e. the centre of Early Baekje communal activity. Another consistently associates four of the five samples from Gorimdong, situated at Yongin (PCA Group 2, Cluster Group 3). And a third encompasses various sites on or north of the Han River, up to Juweol-ri in the north (PCA Group 3, Cluster Group 1). The fourth group is small and includes sherds from both the

centre and Yongin (PCA Group 4, Cluster Group 4); however, as noted, this group includes the Mica-rich fabric, placing it as deriving from geology to the south-southwest of the study area.

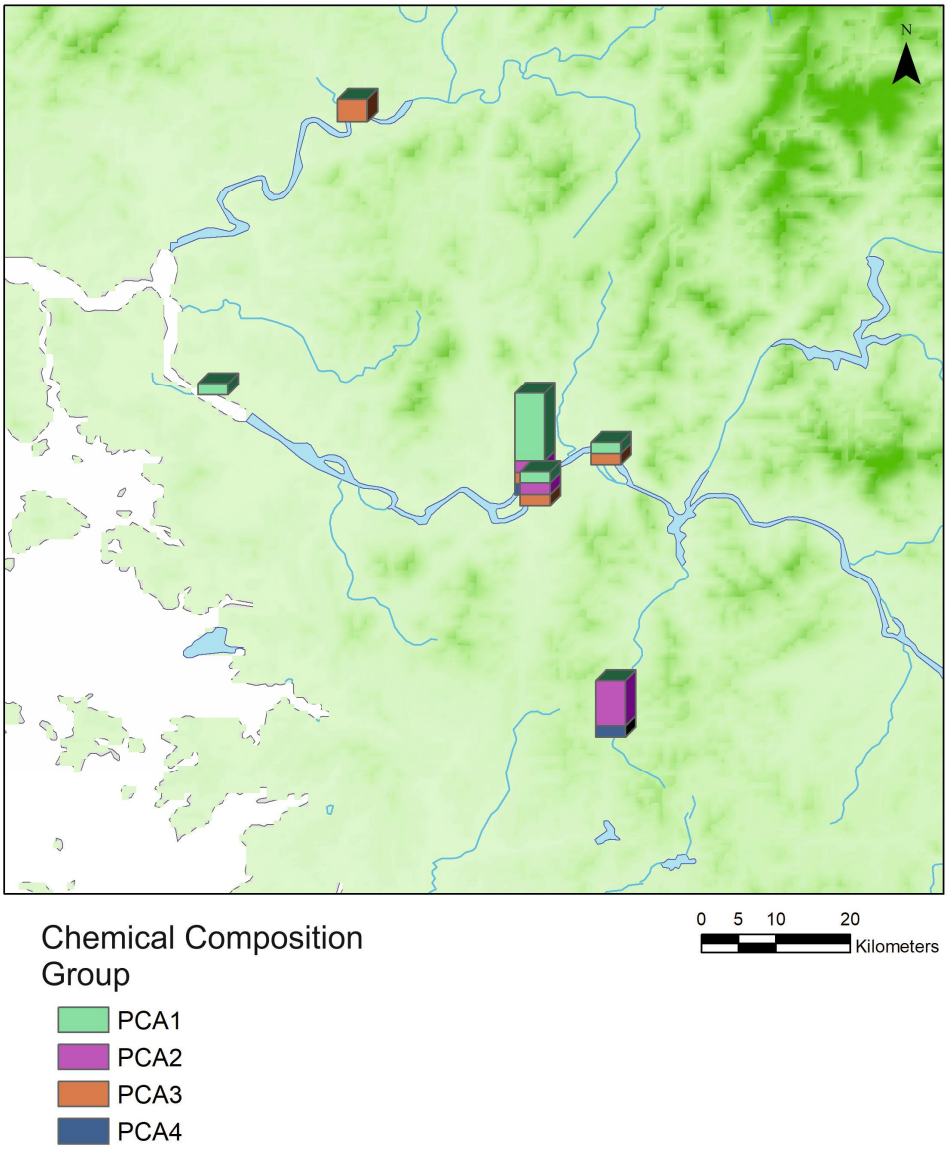


Figure 6-14: The distribution of black burnished pottery samples' chemical groups.

Plotting the (log_{10}) concentrations of key elements highly correlated with particular PCA factors (see Fig. 6-12) further highlights the presence of multiple source groups, although not

necessarily following the groups defined above (Fig. 6-15). In particular the difference between the chemistry of BBP at Pungnab and Gorimdong becomes more obvious. Sherds from the latter consistently have lower Samarium (Sm)[16] and Manganese (Mn) concentrations relative to the bulk of those from Pungnab. The group associated with (primarily) non-Pungnab sites on or north of the Han River has a notably higher Sm concentration than other groups. This group also has lower Mn levels than the majority of Pungnab, but a difference from the Gorimdong samples is not obvious (Fig. 6-15). Finally, the two examples making up PCA Group 4 are characterized primarily via their high concentrations of Ta relative to the rest of the assemblage (Fig. 6-15).

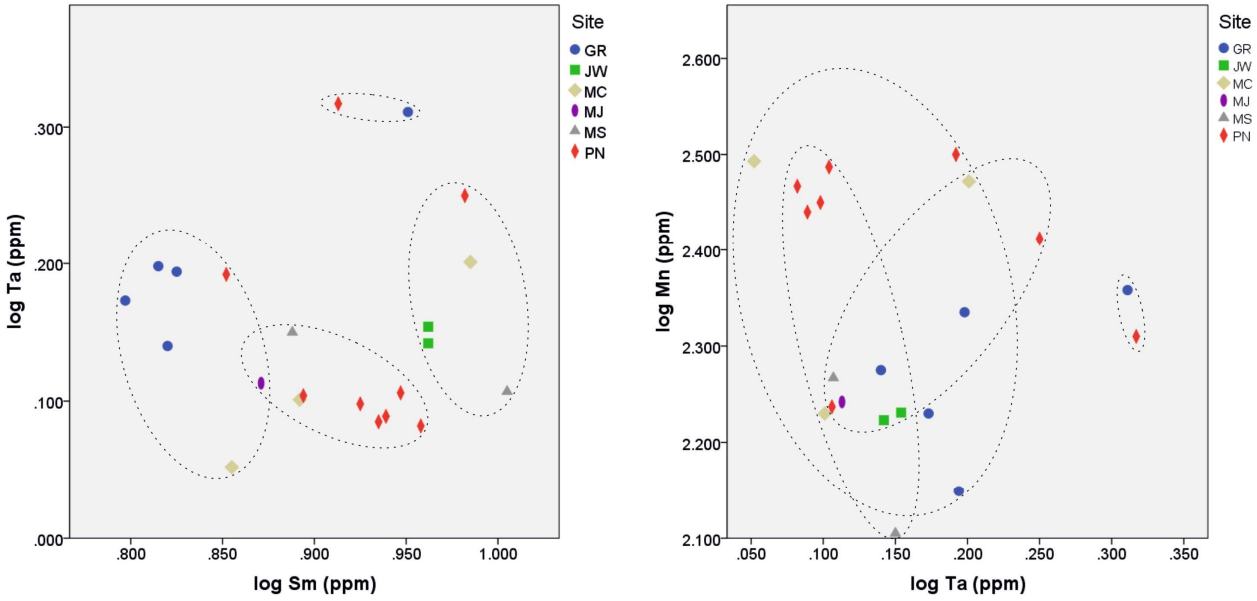


Figure 6-15: Biplots of $\log_{10}$ concentrations (ppm) for key elements associated with PCA factors. PCA groups have been highlighted. In the plot of Ta versus Mn (right hand side) one sample has been excluded (PN5) due to an extremely high Mn concentration.

[16] Europium (Eu) and Ytterbium (Yb) are also consistently lower in concentration at Gorimdong relative to Pungnab and the chemical group including Juweol-ri site.

The ability to create discernable and broadly consistent groups demonstrates that compositional analyses have utility for ceramic studies in this region of Korea. Other scholars have expressed some concern or skepticism regarding the efficacy and viable resolution of compositional analyses here due to the geological and pedological homogeneity of the study area (e.g. Cho, 2006; J. Kim and Kwon, 2008). However, this study tentatively indicates that techniques like INAA can be effective in this region, offering information on likely source groups and their associations with particular past settlements or geographic areas. I say tentative because the sample size and range of contexts sampled (six settlements and no production loci) is limited. Further work with a larger range of ceramic samples from different social contexts would be required to test the resolution and limits of such approaches in this region.

Although the existence of multiple sources can be inferred, the data here does not allow us to say with much confidence where exactly production may have been taking place. While chemical groups primarily give information on the geological context of the clay(s) from which a pot was made (Arnold, 2000), what that 'source' is exactly may be highly variable. 'Source' in this context does not necessarily mean a particular locale or clay pit; it may instead refer to anything from a single clay pit, a widespread clay stratum, or all clays in a particular drainage basin (Arnold et al, 1991: 70, 87; Bishop and Blackman, 2002: 604). Without further work examining production sites and sampling possible raw clay sources it is not possible to securely identify precise geographical areas where the identified sources were likely located (see Tite, 1999).

Even though precise locations cannot be identified, I can conclude that multiple communities were producing BBP, and that they were likely situated in disparate geographical locations. Each source identified here could have been used by just a single community or by multiple

communities. Without more direct evidence however it is not possible to know the spatial relationships among the various sources and the sampled sites; artisans may have been located nearby to the settlements, be at a longer distance, or were present within particular settlements. As Arnold (2000: 368) has noted, pots can travel much further than clays, and ceramic paste compositions alone do not necessarily give strong information on the distribution of finished vessels because distribution is much more dependent on socio-political relationships. The study area is not particularly large, and is characterized by traversable rivers and valleys; thus, any production centres need not necessarily have been in close proximity to the settlements where their products end up.

6-iv-ii: Heterogeneous Making Practices

In addition to diverse loci of production the techniques and technologies used to make black burnished vessels were also heterogeneous, varying *within* sources. There is no consistent association between any particular paste recipe (i.e. petrographic fabric) and the identified chemical groups (Table 6-9). Specific paste recipes and tempering practices are therefore unlikely to be significantly affecting compositional groupings. An exception is the Clay Pellet fabric, which almost exclusively occurs in PCA Group 1 (one exception) and shows a relative consistency in firing atmosphere and temperature (see Table 6-7). Four of six samples from this fabric group are from Pungnab fortress, and the other two sites are also located on the Han River (Fig. 6-14).

In fact, this group appears to represent the major supply source for the Pungnab-Mongchon complex. PCA Group 1 is exclusively made up of BBP samples recovered from sites on the Han River, and 75% are from Pungnab or Mongchon. The artisans working with clay from this source either had an exclusive relationship with the leaders at Pungnab (with BBP vessels

being re-gifted to contacts along the river) or, due to the intensity of consumption, simply supplied Pungnab-Mongchon residents more BBP over time than other settlements. Either way, the production site was most likely near to Pungnab fortress. The former scenario might indicate some control over production and distribution by leaders within Pungnab-Mongchon; however high autonomy of leading households in the earlier phase (Ch. 5; also Ch. 7) would count against this inference.

A certain consistency in firing techniques also broadly characterizes the chemical groups identified via PCA (Table 6-9), and likely relates to differences in local traditions or practice. For example, the majority of PCA Group 1 sherds were fired under 850ºC in an oxidizing atmosphere. For PCA Group 2 an oxidizing atmosphere was generally used but the firing temperatures varied. Examples from PCA Group 3 also show varied firing temperatures but tend towards reducing atmospheres; with Group 4 showing firing was in a reducing atmosphere at over 850ºC. There are only two examples in the latter group however. Firing conditions may affect the concentrations of volatile elements within a ceramic (Minc and Streba, 2017); however this effect only significantly relates to Bromine (Br) (Cogswell et al, 1996), and firing conditions have significantly less impact on elemental concentrations than other technical aspects such as tempering (Sterba et al, 2009). Because none of the key elements identified by the above PCA are volatile[17] variation in firing technology probably did not influence the delineation of chemical groups. In other words, potters using each different source also had particular traditions or preferences regarding firing technologies.

Artisans working with each of the clay sources identified here therefore had their own

[17] None of the relevant elements have boiling points within the range of firing temperatures identified for BBP (i.e. up to 900ºC) (for relevant boiling points see Cogwell et al, 1996: Table 2, p.284).

particular traditions and technological preferences when making BBP, distinct from those using other clay sources. Yet in certain aspects, such as paste recipes, there was further local diversity. How far this diversity may be due to the presence of multiple artisans using the same source clays but different techniques or to drift in local paste recipes through time[18] is hard to say. Migration and population movement may have played a role, but is also hard to identify; although regional exchange, and therefore movements of people, does appear to have been relatively dynamic (see below).

6-iv-iii: Decentralized Production and Diverse Exchange Relationships

Making practices relating to black burnished vessels do indeed appear to have been localized and geared towards local concerns and preferences. The stylistic analysis above noted distinction between Pungnab-Mongchon and other settlements in terms of BBP surface treatments, decorative styles, and preferred vessel forms. The scenario that these differences derive from preferential central redistribution of certain BBP styles appears highly unlikely in light of the compositional analyses, particularly regarding the distinctive chemical signatures at Gorimdong (and Juweol-ri to a less obvious extent).

The artisans working at any identified source may have been specialist potters, but evidence from the production site of Sohadong (see Fig. 6-2 – the largest dot) indicates that communities producing BBP had a wide repertoire of forms and wares. The excavations at Sohadong revealed six domestic or workshop structures and one kiln situated on a low hill less than 2km from a major tributary of the Han River (running north). BBP was found in

[18] For example, Arnold (2000: 355-6) noted significant changes in paste recipes over a four decade period in in Yucatan, Mexico, despite no changes in the scale or intensity of production or clay/material sources.

both workshops and the kiln. Also within the kiln were pieces of greyware serving and storage vessels, including a stylized lidded-bowl. BBP was thus just one type of ceramic among many that Early Baekje artisans manufactured. Sohadong may not be representative of all BBP production, but at least some production was smaller in scale and possibly expedient, made to order or to need alongside other types.

S-b. Park's (2001a) hypothesis that BBP production fell under the direction of the Early Baekje state is therefore highly implausible. Saying this is not to dismiss the centrality of the Pungnab-Mongchon complex, as the bulk of BBP is concentrated here. The importance of black burnished ware would have been heavily mediated through its meaning and use at the political centre. These themes will be expanded in Chapter 7, but the significance of BBP instead comes in terms of emulation and its role in facilitating certain actors' participation in social networks or communities of practice. The centrality of Pungnab-Mongchon to BBP's importance in socio-political relations should not be conflated with central control over, or manipulation of, the distribution of this ware to actors throughout the study area.

With a good degree of confidence I can say that the organization of Early Baekje black burnished pottery production was decentralized in nature, yet serving communities of particular political authorities in some fashion. The individual communities that ultimately did the production appear to have been in preferential relationships with such authorities in particular settlements; most obviously seen in the cases of PCA Group 1 (Pungnab fortress) and PCA Group 2 (Gorimdong village). In both cases, and at other settlements, the consumers of BBP were primarily those engaging in public ceremony and/or feasting. Yet details of the relationships remain obscure without geochemical and petrographic information from candidate production loci or potential raw sources.

Despite such ambiguity the overall distributions of production activity more generally (discussed in Chapter 5) also support a decentralized model, particularly regarding ceramics. Many settlements, ranging from hamlets to large fortresses, show evidence that people there were engaged in some form of production or other. In particular, places with facilities for ceramic production (kilns, clay storage or processing pits) are relatively widely distributed and small in scale (mostly under five kilns, with a maximum of seven). Those living in various sizes of settlement were also often obtaining ceramics made in multiple source communities (Cho, 2006; Walsh, 2017), and a large Early Baekje village outside the study area (to the east) shows geochemical evidence for the localized production of "prestige" Baekje Pottery styles (Cho, 2013). As Costin (1991; 2005) has discussed, the sizes of production loci, their distributions in space, and the social relations associated with production activity are reflective of the organization of past production. Evidence discussed here and in the previous chapter indicates therefore a strong tendency towards localized/decentralized production organization, particularly for ceramics.

Regional exchange appears to have been quite dynamic and possibly crucial to the political economy and reproduction of authority. Black burnished vessels made at each identified source were not only preferentially distributed to people at particular settlements (or made at those settlements), but also distributed widely to other settlements (with certain regional biases). Walsh (2017) finds that while the bulk of high fired greyware produced at a site around 80km south of Pungnab fortress were concentrated at that fortress, it was also distributed widely throughout the Early Baekje region, even on smaller hamlets (also see Walsh et al, 2019). It remains difficult to tell the precise nature of exchange however; producers may have been directly dealing with multiple actors on multiple sites (or shifting in relationships through time), or supplying consumers at particular settlements who

subsequently engaged in further exchange relationships.

Both scenarios are plausible, and in both cases exchange relationships and the items mediating those relationships were highly significant. Artisans having had high autonomy, and maintaining relationships with multiple actors, is plausible considering the background of an LIA society that had strong heterarchical tendencies (see Ch. 4). Procuring certain items from and maintaining relationships with more distant places may also have played a role in the political economy (Walsh, 2017; Walsh et al, 2019), as it did during the LIA (see Ch. 7). On the other hand, the majority of sites with evidence of production appear to have been excluded from the exchange networks concerning status goods like glass beads, import-style ceramics, and feasting/ceremonial ceramics (although a survey of mortuary contexts may identify such items, indicating differences in use and significance). The social status of potters and other artisans would therefore seem to have been lower than during the LIA, subordinated under actors in particular politically central Baekje settlements like those on the Han River and at Yongin (see Ch. 5).

Relationships forged by BBP exchange or procurement were highly socially significant, and did not simply flow one way. Black burnished vessels from multiple sources were brought to the Early Baekje political centre at Pungnab-Mongchon, as well as possibly being distributed out from there to other sites along the Han River. BBP vessels were also curated, with examples of cracked vessels being repaired rather than replaced (see Fig. 6-4i). Such curation may have been due to the difficulty of obtaining replacements, or because the life histories of the vessels, and the (real or fictive) relationships they represented, were socially significant. In both cases the relationships involved in the manufacture and/or procurement of black burnished ware would have been valuable.

Chapter 7

Synthesis: from diverse Late Iron Age authorities to a dominant Early Baekje community of practice

In this chapter I synthesize the previous findings into an expansive account of Mahan socio-political organization, the processes and circumstances that led to the emergence of the Baekje state, and the influence of heterarchical principles on said processes. Generally autonomous households in Late Iron Age (LIA) Mahan had multiple pathways to authority, each with their own social roles and material culture (Ch. 3, 4). Gatherings and feasting were on a smaller more intimate scale, with personal relationships and alliance networks forming the foundations of a dynamic political structure. As discussed in this chapter, such relationships were forged by communal food consumption, exchange of material items, and demonstrations of personal leadership skill (directly and/or by proxy of material culture).

In some contrast, Early Baekje society was dominated by one particular community, those people able to participate in particular feasting and ceremonial practices (Ch. 5). However that community retained a decentralized character, with participants from multiple autonomous households and communities spread throughout the region (Ch. 5, 6). So, why and how did such change occur? Key issues include the building of the first earthen wall fortresses (particularly Pungnab), the veritable explosion in specialized serving ceramics, and the concentration of such serving vessels and other status signifiers within very particular communities.

I argue here that the desire/need to mount tribute expeditions to the Jin 晉 Dynasty court and the construction of earthen fortresses funneled activity and authority through particular people and places. The emergence of more hierarchical or centralized forms of decision-

making was thereby demanded, or at least facilitated. Early Baekje feasting culture emerged as a site of peer-to-peer negotiation and exchange, in keeping with the LIA mode of social exchange. Certain people at Pungnab were able to effectively monopolize exchange with the Chinese mainland, having been a place in relatively intense contact with Chinese authorities during the LIA (Ch. 4, 5). Pungnab thus became a place for alliance-making via tribute payments, exchange and ceremonial participation, with more diffuse power structures persisting until the second half of the 4th century at the earliest (Ch. 5). The building of the earliest Baekje fortresses and the accompanying ceremonial community of practice were not expressions of some central socio-political power but did set the conditions for such power relations to come about.

Early Baekje practice remained rooted in LIA practice; this period is thus the place to start an investigation of Baekje's emergence and organization. Investigating the ways political authority was established and reproduced within a community is critical for accurately ascertaining said community's organization (also Campbell, 2009). An emerging polity's structure will be contingent on historical conditions, which enable certain ways of acting and being while precluding others (or at least making them less likely) (see Barrett, 1994). Without taking prevailing socio-political structures into account study of Early Baekje's emergence and organization risks falling into an exercise of evolutionary classification or a categorization of what 'type' of state Baekje may have been. Identifying antecedent social institutions and working forwards minimizes the risk of imposing teleological expectations of state-like structures onto earlier societies.

7-i: Heterarchy in Mahan: autonomy and multiple pathways to authority

One central question of this thesis was whether ostensibly Mahan communities in and around

the Han River were heterarchically organized. As noted previously (Ch. 3, 4), LIA society in the study area conforms to various expectations (both theoretical and archaeological – see Ch. 2) of socio-political heterarchy. People within autonomous households had relatively open access to status-reputational symbols, with both craftwork and food consumption primarily taking place within individual households or household clusters. Within villages or hamlets individual households show few obvious or long-term material distinctions of 'rank'; this pattern also scales up to the regional level, where only graded distinctions among settlements are apparent. Textual sources indicate that strict vertical authority was relatively weak, with multiple types of salient social title that were either self-proclaimed or by common recognition.

7-i-i: Identifying Mahan's Worlds of Authority

What were, therefore, the salient types of activity that formed the bases of a person's social authority? If the recognition of authority in a particular type of activity may include a material set of signifiers then such sets are likely to be identifiable through archaeological data (see Ch. 2). In the case of LIA/Mahan society around the Han River, three or four such sets and their related activities can be proposed.

(7-i-i-i) Crafting, eating, and participation in exchange

Craft activity (pottery-making, metalworking, cloth spinning) occurred in both domestic spaces and within dedicated facilities. There were artisans working in domestic contexts at eight villages in the area (in all sub-regions), and the presence of craft activity within a household was significantly (yet not strongly) correlated with the presence of status-reputational symbols (Table 7-1)[1]. Households or persons involved in craft production thus

[1] The significant correlation exists both when only sites with production evidence are included (Phi-

apparently had some status conferred upon them. Alternatively, craft production facilitated artisans' participation in other activities which granted the recognition of social status and/or access to particular status signifiers.

	Status Signifier Absent	Status Signifier Present
Production Absent	262 (249.5)	37 (49.5)
Production Present	5 (17.5)	16 (3.5)

Table 7-1: Cross-tabulation of the presences of production activity and status-reputational symbols in LIA domestic contexts; expected values given in parentheses.

The types of status signifier that accompanied artisanal activity were not random; certain ceramic types and beads are overrepresented within production contexts (Table 7-2). Black burnished pottery (BBP) and glass or jade beads are two and a half times more likely to be found in households where crafting was taking place. Access to import-style pottery was unrelated to participation in crafting however, while other status signifiers, such as bronzes, have such low ubiquity it is hard to make a firm conclusion one way or the other.

Coefficient = 0.425, p = 0.000; context n = 320) and when all sites with status-reputational symbols are included (Phi = 0.413, p = 0.000; context n = 337). The Phi-Coefficient is used because one cell in the cross-tabulation has an expected value lower than 5 (see Table 7-1); thus the expectations of a Chi-Squared test cannot be met.

	Import-style Pottery	Black Burnished Pottery	Glass Beads	'Jade' Beads	Other Beads	Sword	Bronze Mirror	Ritual Bronzes	Bronze Personal Ornament
Production (n = 16)	0.563	0.313	0.250	0.250	0.000	0.063	0.000	0.063	0.063
No Production (n = 40)	0.475	0.125	0.100	0.100	0.225	0.000	0.025	0.025	0.000

Table 7-2: Ubiquity scores, during the Late Iron Age, for the various types of status signifier found in domestic contexts with or without evidence of production activity.

Glass and jade beads were therefore often circulating in common social and exchange networks despite the two types of beads' disparate origins. Prior to the 4th century AD jade beads in Korea were mostly made from native amazonite (Glover and Kenoyer, 2019: 182). In contrast, the glass beads on the Korean peninsula were probably from China (likely via the Lelang commandery). From the 1st century AD however some amount of glass originating in south or southeastern Asia may have been entering the region via Indo-Pacific trade routes (I. Lee, 2009).

These beads having different origins yet appearing in analogous contexts indicates a similar local social significance. The specific origin of the beads was thus less important than the fact that the owner was able to obtain and wear/display them. Whether these beads signaled a person's generalized ability or right to enter into particular social exchange networks, or whether crafting ability was the salient aspect being signaled is a difficult question to address. Yet all such beads originated from outside the Han River basin and Hwaseong region, so participation in regional exchange was a prerequisite to gaining access to such items, and some direct involvement in craft activities facilitated this access.

Black burnished pottery being part of the material 'set' related to craft activity and exchange further grounds the conclusion that the primary significance of these social networks was

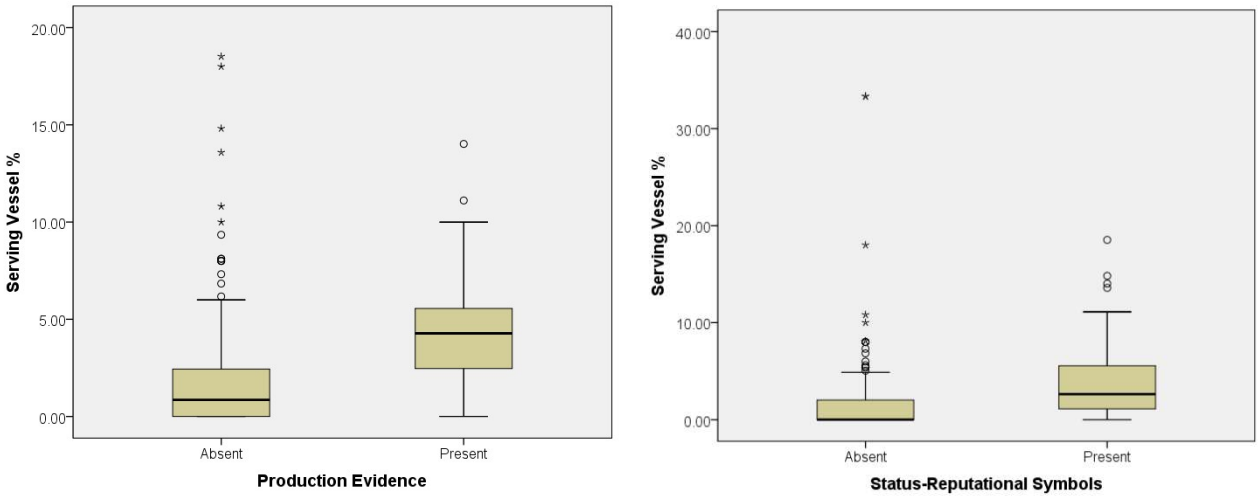
local. BBP is initially localized in the Early Baekje core (i.e. the study area), and manufactured at multiple locations in the landscape (Ch. 6). Emerging in the Early Baekje period (later 3rd century AD), its presence in this discussion is due to the multiple sites that span the transition of LIA to Early Baekje. Its restricted range and apparent absorption into the exchange networks related to glass/jade beads and craft activity indicates that those same networks were locally based despite utilizing non-local materials, at least by the time of the earliest phase of Baekje.

A nexus of linked activities that constituted and facilitated action within a particular world of social authority is evident here, predicated on communal food consumption and exchange. A high proportion of BBP took forms indicating use in food presentation and consumption (Ch. 6); and, in general, those LIA households directly involved in craft activity also contain a significantly higher proportion of their respective settlements' ceramic serving vessels (Fig. 7-1i)[2]. Households with access to status-reputational symbols also saw a greater amount of feasting or food consumption activity (Fig. 7-1ii)[3]. Furthermore, houses where status goods and production evidence co-occur generally have significantly higher concentrations of serving vessels compared to those houses with status goods only (Fig. 7-2)[4]. Finally, the presence of BBP also hints that local leaders acting within these local exchange networks went on to form the foundation of Early Baekje's dominant political community (see below).

[2] Mann-Whitney, Z = -5.260, p = 0.000.

[3] Mann-Whitney, Z = -5.185, p = 0.000.

[4] Mann-Whitney, Z = -2.998, p = 0.003.



(i) (ii)

Figure 7-1: Boxplots showing domestic contexts' percentage of (*site* total) serving vessels in relation to the presence or absence of (i) production activities (absent n = 299; present n = 21), and (ii) status-reputational symbols (absent n = 282; present n = 56 – N.B. three points with over 40% of their sites' serving vessels have been removed from the figure for clarity, although box and whisker shapes themselves are unmodified).

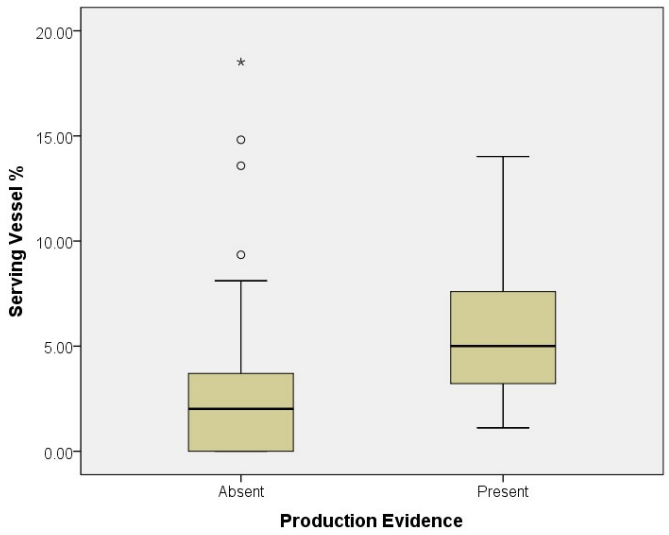


Figure 7-2: Boxplot showing the percentage of (*site* total) serving vessels in relation to the presence or absence of production activities in houses with status signifiers (absent n = 37, present n = 16).

Agate and amber as signifying a distinct world?

In contrast to jade and glass beads, beads made from agate/carnelian (herein simply agate)[5] and amber[6] (also shell) were never found in households with evidence of production activity (Table 7-2 – "other beads"). Were non-glass or non-'jade' beads therefore being acquired through different social exchange networks?

The most likely sources of agate beads during this period are Southeast Asia or China's Yunnan province (present day border with Myanmar, Laos, and Vietnam). A limited range of manufacturing techniques have been identified for the agate beads of the Korean LIA, and these are congruent with known manufacturing sites in south and Southeast Asia/China (Glover and Kenoyer, 2019)[7]. These Indo-Pacific trade routes therefore probably overlapped with those that I. Lee (2009) proposes may have supplied some proportion of glass beads on the Korean peninsula from the 1st century AD.

[5] The majority of such beads found on the Korean peninsula during this period appear to be carnelian rather than agate (Glover and Kenoyer, 2019), but I refer to them all as agate because that is what they are identified as in all relevant excavation reports.

[6] Excavation reports label the beads as being made of "amber", but true amber and other fossil resins can be impossible to tell apart without the application of certain technological analyses (Savkevich, 1975). Therefore "amber" here refers to amber or some other fossil resin.

[7] Glover and Kenoyer (2019) also find that trade networks for these types of beads differed between the Han River basin and the southeastern part of the Korean peninsula.

Reported Colour	Agate	Amber
Orange or Red	4	2
Silver/Greys	1	
Green-Purple	1	

Table 7-3: Reported colours for amber and agate beads found in LIA hamlet and village contexts

These traders may have also brought the amber beads, accompanying the agate beads. Amber from present-day Myanmar or China's Yunnan province began being imported into Southern China from the 1st century AD, although it was not particularly common in China more broadly until the later 1st millennium AD (So, 2013: 88-90). Tight overlap in the source regions and the social contexts the two types of beads appeared within means that this possibility must be taken seriously[8]. The common colours of agate and amber (i.e. yellow, reddish, brown) overlap significantly, and in prehistoric Japan agate often appears to have been a substitute for amber (Bausch, 2003). The range of colours of LIA beads from around the Han River basin does overlap (Table 7-3). The two materials may therefore have been interchangeable or seen as having the same meaning and/or value. People may not have payed attention to the exact material or difference in hardness qualities (etc.), instead being concerned with some other quality (e.g. colour, origin).

Agate and amber beads are also found in contexts that had relatively heightened intensities of

[8] Other nearby sources have been identified in Primorye and Sakhalin (far eastern Russia) (Savkevich, 1975) and the northeast coast of Japan (Bausch, 2003). However, in the latter case amber use did not become widespread throughout Japan until the Kofun Period (4th to mid-6th centuries AD) (Bausch, 2003), and was therefore an unlikely source for LIA Korea.

food consumption, with the wearers of such beads living in households containing higher relative concentrations of serving vessels. Despite the fact that agate and amber beads were apparently not sought after or obtainable by households involved in crafts, there is no significant distinction in the levels of feasting between them and households consuming glass/jade beads[9]. The same applies if contexts with agate/amber beads are compared with contexts containing any other status signifier[10]. All types of bead were therefore displayed in similar, more intimate settings, probably during feasts held in and around single households. However the wearers of agate/amber were engaged in different authority or status granting activities than those wearing glass/jade (who were engaged in crafting), they were signaling some other social role or status and thus likely making different kinds of relationships and alliances.

It is difficult to go further than noting how the social networks and values tied up with agate and amber differed from those relating to other types of status signifier. Valuable (gem)stones often take on religious or ritual significance. The role of jade in Chinese cosmological beliefs is well known (see Barnes, 2018: 4-7), and amber has taken on varied ritual or medicinal meanings and roles in prehistoric and historic Europe and Asia (Bausch, 2003; So, 2013). However in this case agate was the item primarily desired or available. Future research on the exchange networks and social contexts of LIA beads in Korea should recognize that agate/amber beads were probably not simply some generic type of status symbol.

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[9] Mann Whitney; Z = -0.098, p = 0.922 - comparing 15 contexts that contained glass and/or jade beads with eight contexts where agate or amber beads were found.

[10] Mann Whitney; Z = -0.306, p = 0.760 - comparing eight contexts with agate or amber beads with 48 contexts where other status signifiers were found.

The settings for maintaining interpersonal relationships

The setting for this nexus of activities (feasting, crafting, exchange) is particularly revealing. The setting for an activity includes the architecture, space, material, and people involved in said activity, whereby common associations reveal structuring principles and certain aspects of social institutions (or worlds of authority) (DeMarrais, 2004; 2007). The setting for action within the social network discussed here was firmly inside certain houses, and thus involved the inhabitants of (or others associated with) those houses and external parties. The architecture was not particularly large or varied (Fig. 7-3), and the number of possible participants was therefore quite limited. The intimate setting would also have made any status-reputational symbols all the more obvious. Food sharing itself is also intimate, structuring social relationships and status distinctions (Mintz and DuBois, 2002; Pavao-Zuckerman and Loren, 2012). Evaluation of each person's social standing would thus be facilitated, in terms of both visible material culture and personal conduct. All would be visible to all. The high relative autonomy of Mahan households is thus underlined again here; these were not large scale and generalized interactions but tight-knit interpersonal ones, household-household.

Relations within such a distributed network of highly autonomous actors would therefore have been fluid, dynamic, and grounded in personal judgements. Such dynamism was not only within one particular social network, but at least two. Additionally, individuals or households from the same villages participated in different exchange networks, with glass/jade beads and agate/amber beads occurring within different households of the same settlement (Fig. 7-4). Each network was constituted by different competences, and thus probably involved different interlocutors; or specific relationships were in flux through time. Either way, the possibly 'variegated' nature of affiliations within and among the residents of

Mahan villages noted by Chinese chroniclers (see Ch. 3) also appears to be reflected here.

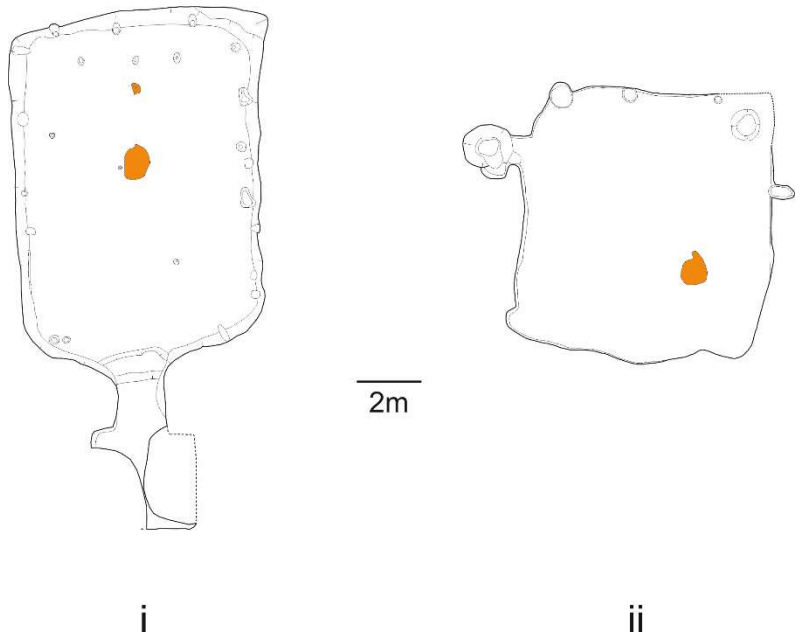

Figure 7-3: Examples of houses containing status goods, showing evidence of production, and with high relative concentrations of serving vessels; orange indicates presence of a hearth/fire; (i) House 19 at Daesoeng-ri (redrawn from Gyeonggi Cultural Foundation, 2009a: Fig. 184, p. 365) (ii) House14 at Wadong-ri (redrawn from Gyeonggi Cultural Foundation, 2011: Fig. 3, p. 30).

These social exchange networks primarily operated along the Han River and the northern part of that watershed (Fig. 7-4). The relatively local scale of these relationships is therefore again highlighted, with the river having facilitated relatively fast point-to-point movement and allowing interpersonal relationships to be maintained. People of authority or intermediaries were therefore travelling frequently among multiple villages and hamlets. Beads may have been exchanged multiple times, having long life histories evidenced by significant wear from being suspended on thread (Glover and Kenoyer, 2019). Items were thus likely passed down-

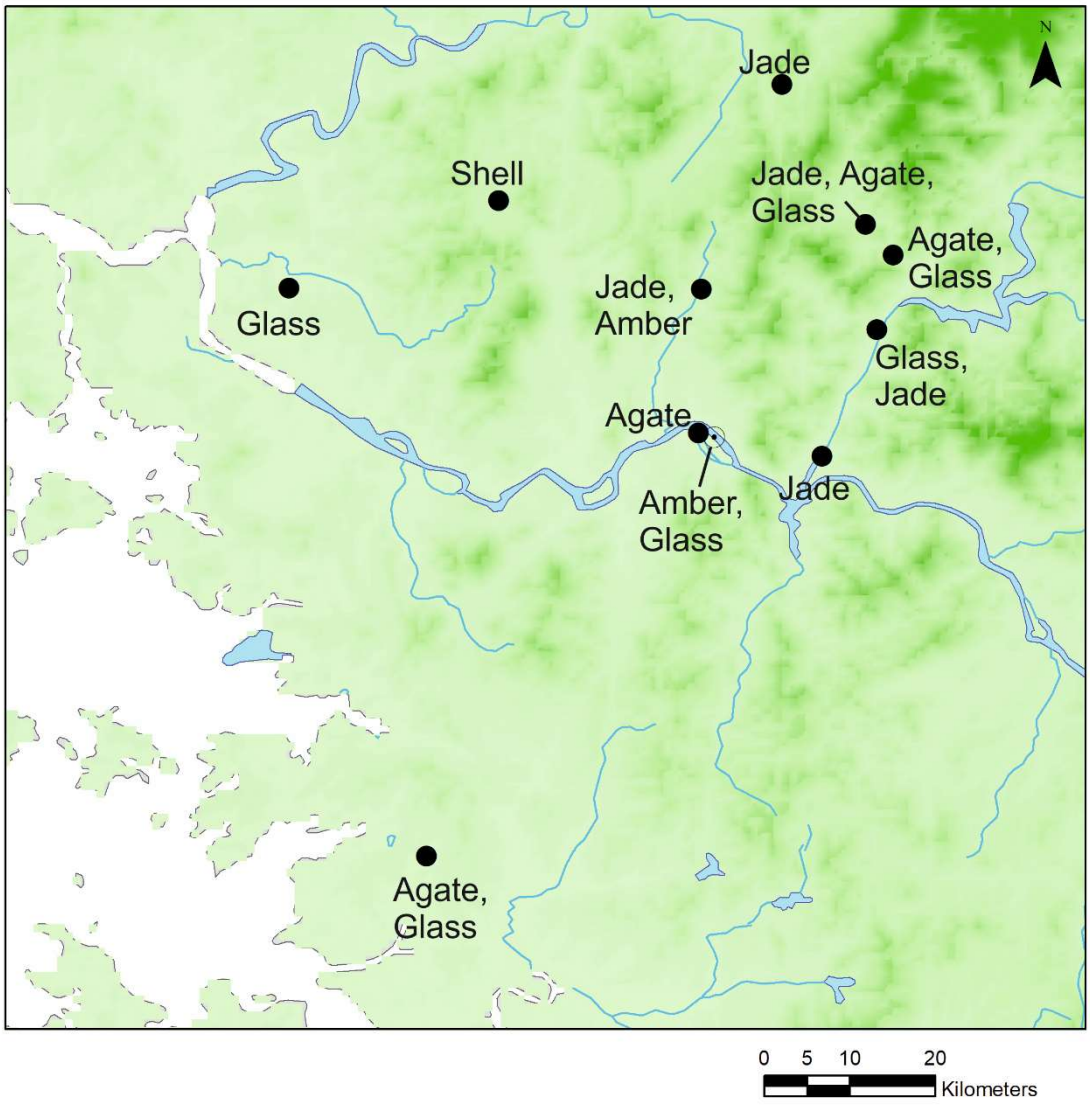

Figure 7-4: Distribution of LIA village and hamlet sites with beads and the materials those beads were made from.

the-line, as individuals or their successors navigated an ever changing social landscape to forge the alliances and obtain the material signifiers that underpinned their social position.

However, there may well be an element of sampling bias to this pattern. In the Hwaseong region multiple production facilities have been discovered (e.g. at Kiandong, Nongseo-ri, Dangha-ri) but not any associated residential architecture. In addition, people at the only LIA village in the area, Balan-ri, do indeed appear to have been participating in the activities of crafting, household level feasting, and the exchange of beads and other items (plus public ritual – see below). Future work may therefore change the picture dramatically, but social connections along the Han River system were clearly very active during this period.

Such interactions were occurring in both villages and hamlets (also see Ch. 4), with smaller sites not excluded from or necessarily marginal to the various social networks. Yet most activity was still within village sites. Such sites saw multiple generations of building and rebuilding, and their longevity may be one reason we see exchange and feasting activities clustered within villages; there were more people interacting with a greater total number of other people through time. Still, settlements with a greater number of households provided a greater scope for making new connections, thus providing a reason for people to stay or move there. The presence of individuals able to build a more stable base of authority would also attract people to villages, further accelerating population dynamics within such settlements. More specific work on the lifecycles of villages and hamlets is needed, but it may well be the case that hamlets were occupied for one generation and then dispersed after the person or household connected into these social exchange networks disappeared or became detached from them.

Investigations of ceramic production and exchange patterns by Walsh et al (2019; also Walsh,

2017) also see Mahan political practice as having been significantly structured by distributed/decentered exchange networks and the maintenance of interpersonal relations. However they also suggest that during Early Baekje certain 'prestige' harder stonewares derived their value from being sourced from afar. However, as noted above, I argue that the scale and significance of these particular exchange networks was primarily local during the LIA, despite often using non-local goods (at least in the case of those related to various types of bead and BBP). Such goods may have derived a certain value or social significance from being non-local (although BBP was firmly a local product), but it was their role in local exchange and the display/signaling of a person's ability to procure such items that created the bulk of the social value.

Status-reputational symbols would also have been salient in the interactions between those that could procure such items and those that could not (or did not want to). Whether such people were followers, kin/clan, or marriage partners, material signifiers would still be recognized as shorthand for competence or authority. The graded differences and overall lack of major architectural or spatial distinctions among LIA households (see Ch. 4) again underlines a generalized autonomy. Small scale household-to-household feasting was therefore likely to have also been a means through which to create and maintain more asymmetric relationships. Feasting to cement alliances or reward/attract short term labour fit such a profile (see Dietler, 2001; Hayden, 2001).

Ultimately though, households and individuals directly engaging in certain forms of craft activity appear to have been the most intensely involved in the nexus of activities identified here. In general no individual status good appears to be associated with heightened intensity of feasting within a household. Rather, the distinction comes between households with artisans and those without. Crafting competence was thus one route to social authority, but

only in that it facilitated the making of interpersonal bonds and alliances.

Some limitations

Certain issues limit knowledge of the probable worlds of authority discussed above. Firstly, sample sizes are relatively small, particularly when looking at patterns involving individual types of status signifier. The relative rarity of items like beads means that the identified distributions and associations may be due to chance. Yet, the scope of the study includes every identified residential context in the study area, minimizing as far as possible any sampling bias under this author's control.

Secondly, the co-occurrence in certain contexts of the various features discussed above may have been influenced by specific taphonomic processes, which would lead to a mistaken association among these features. Some such features are indeed houses that were apparently burnt down, leaving a well preserved and rich assemblage. However other houses found in the same state (and on the same sites) have very different assemblages, meaning the identified patterns remain salient despite variation in the preservation conditions. These data, at least, offer a base from which to look at other contexts (like funerary data or settlement sites excavated in the future) with a fresh perspective.

(7-i-i-ii) Public ceremony and ritual

Communal food consumption also took place in public. Three village sites had a relatively high proportion of serving vessels deposited in non-household contexts (see Ch. 4-ii-iii regarding Misa-ri, Balan-ri, and Wadong-ri – Fig. 7-5). The people engaged in public ceremony may have been the same as those hosting and attending feasting within households. Yet the limited distribution of villages where public feasting took place, and the distinct setting, indicate that public feasting and ceremony was an activity that took place at a

different time or with a different atmosphere than meal sharing inside houses. In other words, public feasts were distinct events with distinct meanings, even if the participates may have been largely the same as those engaged in more intimate household feasts.

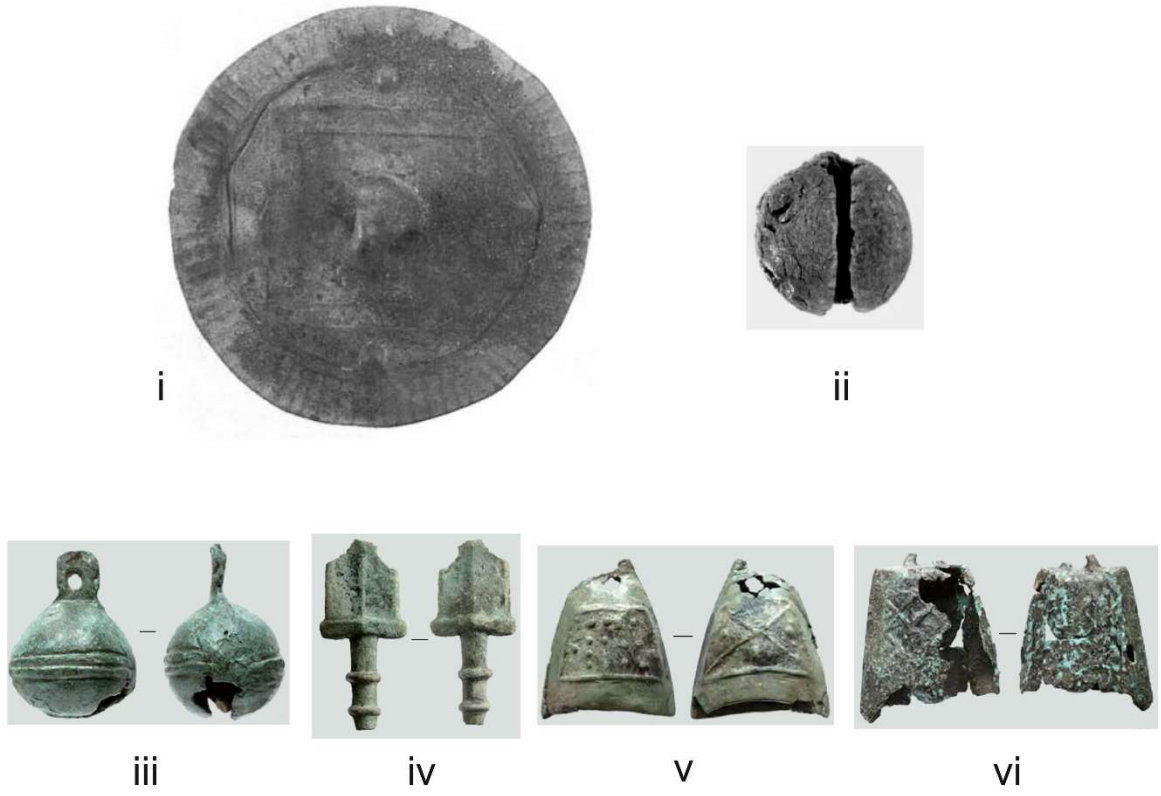

Figure 7-5: Bronze items found on sites with relatively high intensities of public feasting; (i) bronze mirror from Misa-ri (from Institute for the Excavation of Misa-ri Prehistoric Site, 1994a: Photograph 62-1, p. 393), (ii) bronze bell from Balan-ri (from Gyeonggi Cultural Foundation, 2007a: Photograph 41-13, p. 69), (iii-vi) bronze bells and dagger from Wadong-ri (from Gyeonggi Cultural Foundation, 2011: Colour Photographs 2-12 to 2-15, p. 4).

Public ceremony therefore likely had its own particular set of practices and values. Indeed,

villages with evidence for public feasting also had resident ritual specialists[11] and high investments in non-household food storage. Both Wadong-ri and Balan-ri have houses containing bronze bells (see Fig. 7-5), which have been associated with other bronze ritual paraphernalia since the Early Iron Age (EIA) (Yi, 2009b: 35). The importance of bells in Mahan peoples' ritual practice was also noted by Chinese chroniclers in the *Sangouzhi*[12]. In addition, one large house at Misa-ri contains a bronze mirror (Fig. 7-5i), another part of the EIA ritual set (Yi, 2009b: 35; Lee, 2012: 85). The example here is certainly of a similar EIA tradition (Bae and Yoon, 1994: 356). Some scholars suggest this mirror indicates that a local ruler or ritual leader resided at Misa-ri (e.g. Lee, 2018); the fact that Misa-ri shares features with other villages showing evidence of public ritual activity certainly lends support to the latter suggestion.

Additionally, significant investment in food storage facilities characterizes these three sites, with ritual and public ceremony being supported by longer term planning and bulk food storage. Over 80% of all identified storage features exist within just these villages. Between around two-thirds to one hundred percent of the storage facilities at these three sites were above ground granaries or storage bins (Ch. 4).

The public nature of such storage, being placed in visible facilities raised above the ground,

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[11] A "ritual specialist" here does not indicate somebody dedicated full time to ritual activity but indicates someone with a degree of esoteric knowledge that grants recognition and leadership within the community.

[12] "Each of the various polities has a separate village which they call a *sodo*. A large piece of wood is erected and they hang bells and drums from it to serve the spirits (諸國各有別邑 名之為蘇塗 立大木 縣鈴鼓 事鬼神)" (*Sangouzhi*, *Weizhi* Vol. 30, *Han zhuan*).

indicates that particular people within these villages had a certain level of control over such storage activity. Yet storage facilities were not sequestered into particular compounds but took on the multi-centric distribution characteristic of this period (see Ch. 4). Multiple households within the same village may therefore have been competing and sponsoring ritual specialists to lead ceremonial gatherings.

Alternatively competition to contribute to more general public ritual may have been the main factor. Chinese visitors recorded that communal ceremony and feasting took place at least twice per year in Mahan, once after sowing and one after the harvest[13]. A role for a ritual specialist in these events is highly likely. Larger scale gatherings at regular times through the year would necessitate the planning, storage, and preparation of foodstuffs. Communal investment by all residents in a village would prompt observations of who invested what or how much, and would therefore stimulate some level of competition among the autonomous households making up the village.

A final point, only tangentially related to public ritual, is that these three sites could well have been situated at significant nodes of trade routes. Wadong-ri was near the mouth of the Han River, Misa-ri was near a confluence of three major tributaries of the Han River, and Balan-ri was both near the coast and potentially on a route from Hwaseong to the lower Han River via Yongin (Fig. 4-12). If these settlements were important places for trade and exchange the three settlements also being places of ritual makes some sense; people would have been attracted to these places in order to participate in social exchange and competition, offering

[13] "Regularly, in the fifth month, after sowing is finished, they sacrifice to the spirits… in the tenth month, after the farm work is complete, they repeat this (常以五月下種訖 祭鬼神… 十月農功畢亦復如之)" (*Sangouzhi*, *Weizhi* Vol. 30, *Han zhuan*).

'tribute' to leaders or funding ritual via resident specialists. What came first, a settlement being either a trade/exchange centre or a ritual centre, is a rather difficult issue to pick apart, but either way distinct activities and material culture related to likely ritual specialists were focused on these three sites.

A public setting

Regardless of the exact mode of provisioning, the public setting of this ceremonial feasting had features that contrast strongly with those that took place within households. A greater number of people were likely involved, both in terms of preparation and participation. An open setting would facilitate intervisibility, although in a broader sense than when in close quarters; attention would be spread among many rather than focused on one or a handful of partners. Evaluation of others in the community through personal conduct and material signifiers would have occurred, along with the ability to display an individual's own status and competences. Making new contacts and identifying potential partners that may not be previously known are likely to have been part of these public gatherings. Ceremony itself would reaffirm individuals' existing social position, particularly for those that led and funded it. Public feasting would therefore have facilitated a degree of community integration, allowing people to see each other and know each other, while affirming their relative status and/or competing to demonstrate their own competences.

Not a great deal can be known about the organization of the ceremonies, in part because it is hard to see any formal meeting spaces and there is a general lack of structured deposits. The numbers of people involved is thus hard to judge, and the only candidate space is a series of ditches at Wadong-ri that form a small circular enclosure of almost 150m^2 (Fig. 7-6). This space is around twice that of a larger house in this hamlet, so the number of people that could

have participated was still quite restricted, although those inside would be visible to those outside. Still, the ditches are rather irregular in shapes and depths, thus may not actually be outlining any particular space for activities. Pungnab has a more obviously delineated space through its triple ditch feature (see Ch. 4), yet not much can be concluded because the associated residential area shows none of the features discussed above. Nor is there any evidence of what activities were going on inside the enclosure (assuming it was ever finished).

Figure 7-6: Possible circular enclosure ditches at Wadong-ri; in plan (redrawn from Gyeonggi Cultural Foundation, 2011: Fig. 26, p. 75) and photograph with ditch highlighted (modified from Gyeonggi Cultural Foundation, 2011: Photograph 119, p. 469).

Indeed, rather than indicating ceremony or feasting taking place in formal meeting areas, public food consumption appears to have taken place within or around individual household clusters (see Fig. 7-7). The scale therefore remained rather small, probably again restricted to alliance/work-style feasts. The lack of formal meeting areas and the apparent focus of feasting within respective household clusters may be due to a competitive element. Attempts

Figure 7-7: Locations of serving vessels unearthed at Misa-ri village (modified from Institute for the Excavation of Misa-ri Prehistoric Site, 1994b: Figs. 3 and 4, pp. 11-12).

by particular actors to strengthen or formalize intra-village relationships through generosity and the sponsorship of ceremonial activities were also likely.

Ritual specialists as parallel authorities

Organizing communal ceremony and feasting, and the necessary gathering of relevant resources, has often been highlighted as a source of social authority in communities with more diffuse power structures (see Sahlins, 1963; Hayden, 1996, 2014; Wiessner, 2001; Scott, 2009). However in the case of Mahan it appears that such activities were, to some extent, mediated by recognized ritual specialists. I argue that the ritual specialist therefore operated as a parallel authority, becoming prominent at particular times or in particular situations. As the Chinese records note, the ritual leaders of Mahan were recognized or "appointed" by the community at large (see Ch. 3-iii-i). The authority of the ritual specialist and those sponsoring public ceremony were therefore mutually supporting; the specialist's position and status was affirmed by orchestrating and leading public ceremony while the sponsors also gained public recognition and solidified authority over subordinate households.

(7-i-i-iii) Interaction with the Chinese authorities

Relationships with the Chinese commanderies of Lelang and Daifang were also a likely source of social authority, granting titles and other official/exotic goods; although not necessarily as important locally as previously thought (see Ch. 3). In addition to the textual accounts, relationships between various Mahan villages and the commanderies are evidenced archaeologically. Lelang-style pottery is distributed throughout the study area, and its forms indicate that they were likely to be transport and/or storage vessels (Fig. 7-8). Some were also repurposed into cooking vessels (Fig. 7-8iii). The contents of the jars were thus likely the desired product rather than the jars themselves. Still, because much social interaction took

place within the household space, the presences or display of Lelang-style pottery may have passively or actively signaled some direct relationship with foreign authorities.

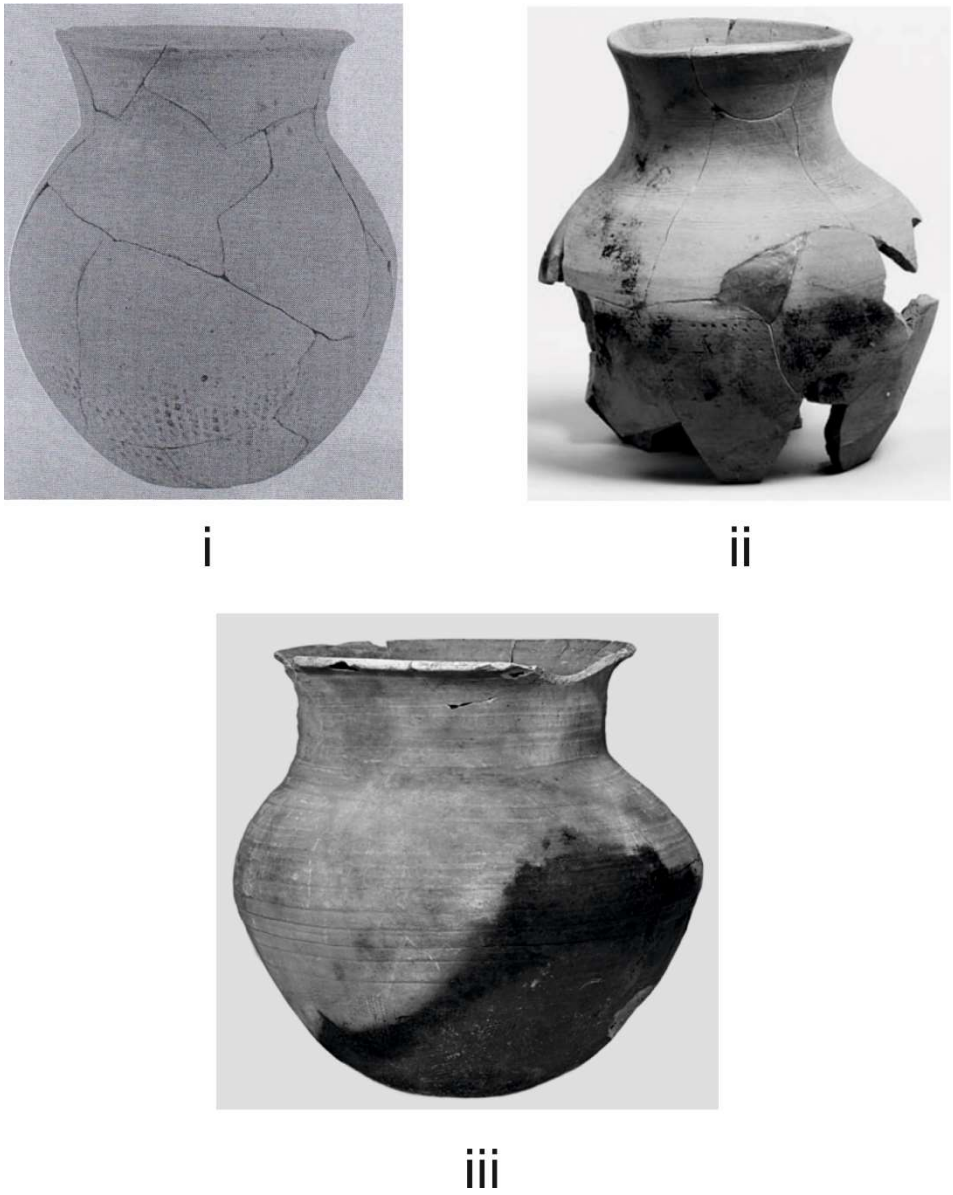

Figure 7-8: Common shapes of Lelang-style pottery at Pungnab and Daeseong-ri villages; (i) Pungnab (from NRICH, 2013: Photograph 30-304, p. 691), (ii) Daeseong-ri (from Gyeore Institute of Cultural Heritage, 2011: Photograph 86-1, p. 395), and (iii) Daeseong-ri (from Gyeonggi Cultural Foundation, 2009a: Photograph 136-7, p. 166). Note the marks suggesting use in cooking on (iii).

Contact and exchange between the people of Mahan and the Chinese commanderies is portrayed in the texts as relatively open to the former (see Ch. 3). However such openness stands in some contrast to a situation where 75% (total n = 64) of Lelang-style pottery is concentrated within just two villages; Pungnab and Daeseong-ri (see Ch. 4 – Fig. 4-15, Table 4-2). Certain individuals at these two villages were therefore most intensely engaged in exchange with the commanderies. Such relationships put them in a potentially privileged positon, able to pass on valued goods (e.g. the contents of those jars, or official seals and clothing) down the line to people living elsewhere.

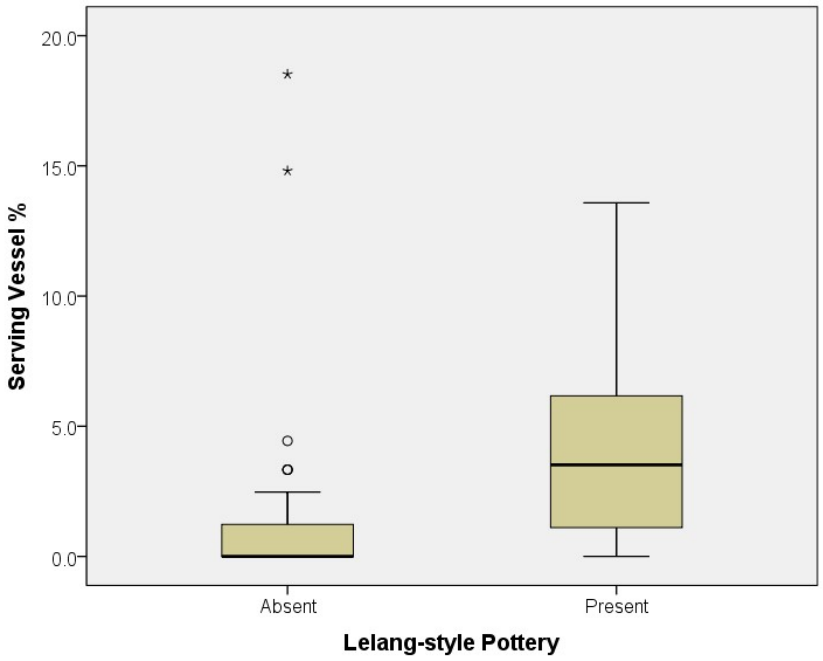

Figure 7-9: The (site) percentages of serving vessels in houses at Pungnab and Daeseong-ri with (n = 18) and without (n = 54) Lelang-style pottery.

While titles and official objects themselves likely conferred a certain amount of social authority within Mahan, the ability to procure them and other goods for exchange in local

social networks was the activity of value. The widespread sharing of official paraphernalia is attested to in the Chinese texts (see Ch. 3), and households interacting with Lelang were also participating in more intense peer-to-peer feasting. At Pungnab and Daeseong-ri households containing Lelang-style pottery have significantly higher concentrations of serving ceramics than those without such pottery (Fig. 7-9)[14].

Like the artisans and others discussed above, those individuals most intensively involved in the exchange of goods with Lelang were also more involved in hosting feasts and thus forging alliances and further exchange partnerships. These two worlds appear to be more-or-less separate, with little notable difference in the ubiquity of Lelang-style pottery between artisan's households and others (see Table 7-2). Local leaders within these two villages were thus in an advantageous position, having privileged access to certain resources, which facilitated the creation and maintenance of the interpersonal alliances that grounded Mahan social authority.

7-i-ii: Peer-to-Peer Relationships, Evaluation, and Costly Signaling

Multiple more-or-less separate or situational types of authority existed in Mahan, all founded in peer-to-peer relationships mediated by communal food consumption. Both face-to-face and more public settings facilitated evaluation of exchange partners, of ritual knowledge, of those providing resources, or simply who is regarded well (or poorly) by whom (i.e. people's reputations). The high autonomy of social actors put the onus on would-be authorities to demonstrate their competences; e.g. their ability to procure certain items, provide for and organize public ceremony, or maintain the knowledge necessary to carry out such ceremony.

[14] Mann-Whitney Z = -3.281, p = 0.001. These results may of course be influenced by taphonomic factors; see discussion above.

Social authority was thereby contingent and situational. The general flatness in social distinction and a multipolar world, where particular people and villages specialized in particular activities, point to such contingency.

Reputation can be a powerful organizing principle within a community (Milinski et al, 2001, 2002; McIntosh, 2005; T. Ahn et al, 2009), and within the various Mahan worlds of authority particular pieces of material culture acted as shorthand for signaling and evaluating reputation. Costly signaling can play an important role in human cooperation (Soler et al, 2014; Conolly, 2017: 437), and certain material goods will signal which individuals are successful and worth paying attention to, often dramatically altering behaviour (Ahn et al, 2004: 131-5; Plourde, 2008) (within a certain value framework). Conolly (2017: 440-2) suggests that any candidate phenomenon needs to be shown as visible (or playing to intrinsic sensory systems - see Soler et al, 2014), costly, and accompanied by independent measures of power/influence.

A framework to judge the situation in Mahan is thus offered; material culture associated with identified Korean LIA worlds of authority were probable costly signals. The various types of beads and ceramics highlighted above would have been highly visible in the close quarters of feasting within a household, as would whatever may have been transported within the Lelang-style vessels. Procuring such items required having the ability and material means to form and sustain relationships with individuals or communities in other settlements. Bronze ritual items would have been eye-catching, and bells would likewise stimulate the senses and draw attention. Correctly carrying out ritual would itself also be a costly signal, requiring high investment to learn the requisite knowledge. These items being significantly associated with production activity and feasting evidence provides independent measures of household 'success', demonstrating that actors also had competence in production and/or the means to fund communal food consumption.

7-i-iii: Too Many Chiefs, or Too Few?

Little evidence points to a classical chiefdom society in Mahan. High degrees of autonomy and a multitude of people with authority/influence undermine any suggestion of generational and strict social hierarchy, while rank or title was derived from personal authority rather than authority being derived from social rank and titles. Mahan clearly had recognized social positions (see Ch. 3), but such status appears to have been more attained than ascribed. Such dynamism, ultimately based on the maintenance of local interpersonal relationships, would have made life very complex, with different individuals and households within the same villages or hamlets involved in different activities and social networks (also Brumfiel, 1995). The many individuals who could be labelled 'chiefs' held their position situationally and had influence only in so far as their personal networks, competences, and reputation could allow.

This ever shifting and multi-polar landscape was the world from which Baekje emerged, meaning I must make a radical reappraisal of state formation processes. Social evolutionary schemes proposing that states emerge from chiefdoms do not appear to apply in this part of Korea, as noted by Sarah Nelson (1993a) over two decades ago. So how did a nominally bureaucratic state with a hereditary king emerge from an LIA society rooted in smaller scale, often face-to-face, personal networks among autonomous households? The dynamism and persistent heterarchical tendencies characterizing larger Early Baekje sites (see Ch. 5) indicates that chiefdom organization cannot simply be pushed forward into the initial phases of the Early Baekje period. As Yoffee (1993) has noted, early states often had multiple axes of authority with elements of achieved status, and states with high levels of collective action and cooperation need not have had a single paramount (Blanton and Fargher, 2008; 2016). The centralized autocratic regime generally assumed to have characterized Baekje (often modelled on the Chinese Imperial court, see Walsh et al, 2019: 153) may thus need to give

way to a more collaborative or participatory picture; a state built from shared projects and institutions rather than one imposed by some paramount authority.

7-ii: The Constitution of Early Baekje through Shared Ceremonial Practice

Baekje was not the Machiavellian project of any particular chief or chiefly family (as none can be identified) but rather emerged from the principles that organized LIA society; personal networks and alliances of autonomous social units mediated by communal food consumption. In the initial phase of Early Baekje a community of practice related to feasting culture and public ceremony developed; an amalgam of traditional LIA sources of social authority (food sharing, sponsoring/leading public ritual, and exchange). These activities were primarily focused at Pungnab fortress (and later on, Mongchon fortress), but significantly also at Yongin, and in the wider region (Ch. 5). Decentralized production of relevant parts of the stylized serving ceramic set (i.e. black burnished pottery – Ch. 6) and regional preferences for certain parts of that set (see Ch. 5) indicate both autonomous engagement with the central fortress community and the development of local significances.

Certain individuals and communities took the opportunities to effectively control access to particular goods and community practices, meaning fewer people were able to accrue political authority. Yet heterarchical organizing principles continued to structure social relations and practice in ways as yet unacknowledged, particularly during the earliest phase. Face-to-face interaction, peer-to-peer exchange, and relatively smaller scale feasts/ceremony remained the primary mode through which political power was built.

7-ii-i: Baekje's Community of Practice: prior to the 5th century AD

During the earlier phase of Early Baekje (pre-late 4th-5th century) particular people living in settlements throughout the study area engaged in communal food consumption using a

specific set of stylized serving ceramic and public ceremony involving the deposition of intentionally broken or overfired pots (see Ch. 5, 6). Communities at Pungnab fortress and various villages at Yongin were those most intensely engaged in these practices (although other communities in the Han River basin were also sporadic participants). Public feasts were held within residential areas and ceremony performed in open and visible spaces (for example in the ritual space of Pungnab and the slopes/tops of hills at Seoku-ri – see Ch. 5). The settings and material-culture would have been widely recognizable to residents of both areas, and demanded common competences in terms of participation and understanding. The involvement of non-residents, at least at Pungnab, is also likely, with people coming from other villages in order to participate in these ceremonies (see Ch. 6). Individuals involved in feasting and public ceremony thereby formed a regional sub-community to themselves, a community of practice defined by shared use of material culture and the competences involved in its procurement and uses.

A community of practice is a group of people defined by particular shared sets of practice, routines, conventions, and histories (Wenger, 1998; also Knappett, 2011: 102-6); "a locally negotiated regime of competence" (Wenger, 1998: 137). Due to an emphasis on social learning and the building of task competence, in archaeology the community of practice has most often been used to study crafting (e.g. Minar, 2001; Sassaman and Rudolphi, 2001; L. Johnson, 2014). However the concept also relates to identity and group formation via participation, mutual recognition, and competence in a particular type of activity, and therefore has a broader application when studying sub-communities such as the one that arose during Early Baekje.

Communities of practice are maintained by mutual engagement and negotiation to achieve some joint enterprise or project while using a shared material and behavioural repertoire

(which could be as simple as survival or as complex as administering a state) (Wenger, 1998: 72-84). A community emerges through the relations among members; the reactions, expectations, and competences of the relevant people rather than the intentions and actions of specific individuals. Communities of practice are thus likely to share figured worlds (*qua* Holland et al, 1998) and value frameworks underlying particular worlds of authority (Ch. 2).

Harmony, collaboration, and equivalent status among all actors need not be assumed; competition, conflict, or formal hierarchy may be endemic (Wenger, 1998: 56-7). Yet a boundary will always exist between a community and other people, which is why I use the concept here, because a stable bounded leading community emerged during Early Baekje, something different from the more fluid and open social networks of the LIA. Consciously realized and reinforced boundaries may be emphasized and marked by material or social symbols of membership, but boundaries may also simply exist in the form of the knowledge and competences needed to participate (Wenger, 1998: 103-4, 126). Either way, boundaries are likely to become reified over time as distinctions between members and non-members become more obvious or socially salient.

Shared sets of material culture are obvious signs of a community of practice, be they practical tools, documents, or more symbolic items (Wenger, 1998: 47; Knappett, 2011: 122). Even if an in-group is not explicitly articulated, the shared routines and activities characterizing a community of practice will create distinct patterns and agglomerations of material culture. A shared material set may also extend the geographic range of a community, and the mutual recognition of particular objects being used in particular ways can allow communities of practice to emerge and be maintained on the macro-scale (Knappett, 2011: 124). Thus, while geographical proximity may aid the formation of a community it is not a necessary component (Wenger, 1998: 74); community membership relies on shared and relevant

competences (and the mutual recognition of said knowledge), there is no need for each individual member to know all other members. Identifiable material sets with consistent use patterns therefore embody histories of communal engagement and the projects or institutions these communities were involved with.

Early Pungnab-Mongchon Complex: a centre of attraction in a distributed network

Pungnab fortress, combined with the sister fortress of Mongchon in the latter part of the 4th century (Ch. 5), represents the largest cultural and population centre the Han River basin had seen. Over half of all ceramics from the Early Baekje period settlements were found here, indicating a scale of consumption and ceremonial activity far beyond other villages in the region. Ceramics were being brought into the fortress from multiple locales of production (Ch. 6 – also Kim et al, 2016; Walsh et al, 2019), along with imports from the Chinese mainland and other regions of Korea (Ch. 5; Kwon, 2002). In other words, large numbers of people were moving into Pungnab fortress, to exchange goods, to participate in ceremony, and probably to live or work (especially in the initial phases of construction). That almost two-thirds of the study area's stylized serving vessels are concentrated here (Ch. 5) further highlights the Pungnab-Mongchon Complex as the epicentre of Baekje's dominant political community.

In its Protohistoric phase Baekje took the form of a geographically and socially distributed network of multiple autonomous authorities that converged at Pungnab-Mongchon. In its earliest phase Baekje was thus an alliance network of autonomous communities, converging upon various leadership groups or figures within Pungnab who had been able to monopolize international exchange (see 7-ii-ii below). Involvement in political action and alliance-making remained relatively fluid and decentralized, coordinated among particular households

within and between Pungnab, Yongin, and other parts of the region. People were not necessarily obliged to participate or pay tribute by some central authority but, similarly to the various leaders during the LIA, held and attended feasts to exchange, obtain status signifiers, and make alliances that built personal authority. Participation was likely limited by people's material means, social networks, and status, needing a base of one's own to procure exchange goods and provisions for ceremony, plus the opportunities to build competence in a more formalized dining culture.

Of the two residential 'districts' excavated within Pungnab the residents of only one, Area 197, were participating in communal feasting and ceremony, overwhelmingly so; some stratification is thus evident. One large meeting house and a pavilion also stood in Area 197, again highlighting the probable district scale focus of these activities. Multiple actors were sponsoring ceremony around their residences, akin to alliance-making or self/clan empowerment feasting noted ethnographically (see Dietler, 2001: 76-82; Hayden, 2001: 55-58). Large scale feasting characteristic of chiefdoms or early states is not evident until the 5th century (see 7-ii-iii below). Even at Mongchon, from the late 4th century, the scale of feasting appears to have remained relatively small, held among a limited number of individuals within pavilions and/or around artificial ponds (although by then Baekje's political community of practice was likely ossified and strictly exclusionary).

In the early phase, public ceremony within Pungnab shows some continuity with the LIA, but also increasing formalization, scale, and probable role specialization. Ritual actors associated with the 'shrine' building (see Ch. 5) being separated from the main sites of feasting activity again mirrors activity during the LIA. The formal ritual space, the large shrine building, and the storehouse containing imported wares and exotic foodstuffs, indicate a far higher degree of organization and scale than the earlier period. Even so, the ceremonial activity still appears

more sporadic, with most deposits scattered around in smaller irregular pits. Ceremony was thus still perhaps on a more intimate scale, possibly sponsored by households like those putting on public feasts in Area 197 (or others like them).

The setting for ritual activity, in a formal space at the centre of an apparently open plan fortress, would have been both highly visible and audible; even those not participating would have been aware of such public communal activity. The same goes for feasting. Any ceremony's leaders and sponsors would thus have also been known. Even if not by design, the fortress walls bounded the community, and reinforced the identities and social positions of those involved (also applies to Mongchon). The materialization of some type of leading ideology (see DeMarrais et al, 1996) may be suggested from this evidence; but activities remain small scale, the emphasis within one community and the lateral relationships within.

Analogous activities at Yongin, plus the presence of BBP from multiple production loci[15], indicates that individuals from other settlements were also likely taking part in ceremony within Pungnab. People at Yongin had shared competences and an analogous material set, and at least some of them would have had direct relationships with others at the fortress. The act of coming to the fortress with the relevant social status and competence to participate in and/or contribute to these ceremonies would have been a powerful signal of status and identity to both the self and others (both within the fortress and the home community). The fact that leaders from across the region were embedded within Pungnab's ceremonial activities indicates that this network is best envisaged as a community of practice rather than one of independent peer-polities borrowing from one another (Renfrew and Cherry, 1986).

A storehouse for exotic goods being located in the ritual space suggests that ritual leaders or

[15] Note; none of the Pungnab black burnished pottery samples were from the ritual space.

shrine attendants had significant control over the presentation or distribution of such status signifying goods. Whether shrine attendants themselves were directly involved in procuring such items or whether these goods were provided by sponsors is an open question. Either way these ritual leaders were placed in a mediating role and as representatives of the whole community, a possible counterpoint to secular authority similar to the situation during the LIA.

Ceremony at Pungnab thus played an integrative role for the communities and individuals participating in activities there, facilitating status competition, alliance-making, and cooperation. Shared participation in and/or viewing of ceremony solidifies social bonds and identities, giving some more disparate community some extent of physical reality (Inomata, 2006). Ceremonial events attended by people from the wider region integrated and reinforced Baekje's political community of practice and allowed the redistribution of status goods (e.g. imports, glass beads). These exchanges cemented the relationships necessary to maintain authority for actors in the fortress and throughout the region.

Fluidity and a parallel political community of practice also operated at Yongin. Here, multiple actors within different villages were engaged in feasting, either at the same time (with those at Pungnab and each other) or whereby the centre of authority shifted among villages through time. A parallel local community of authorities engaged amongst themselves may go some way to explaining the particular preferences for footed bowls and certain forms of black burnished pottery in this area. Independent local production of BBP is also likely here (Ch. 6), along with other ceramic production and metalworking (Ch. 5). Certain actors thus had a high degree of autonomy from any authority at Pungnab, again highlighting the nature of Early Baekje political practice as one of engagement and participation rather than one of imposition.

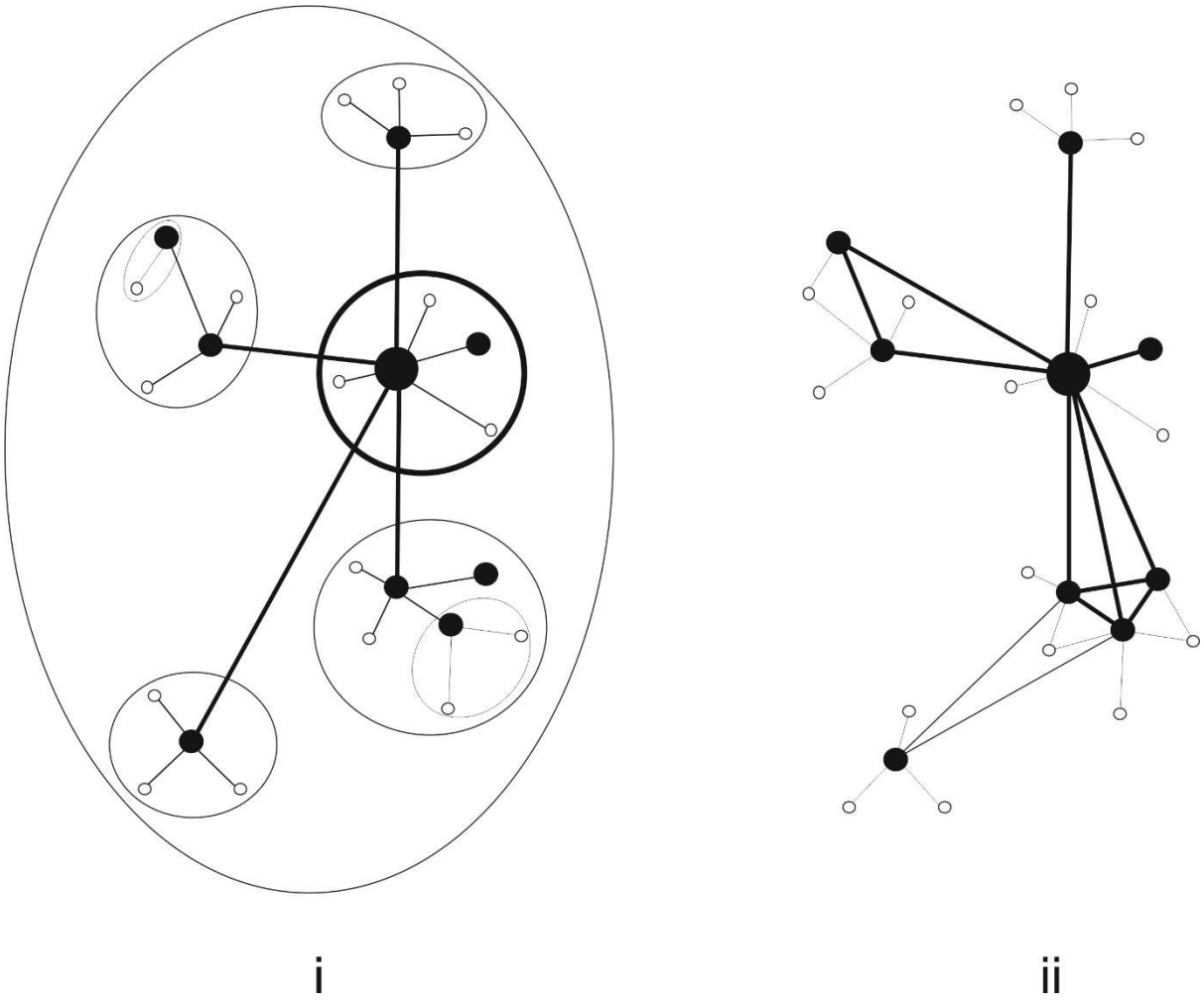

Figure 7-10: Two schematic views of the Baekje state (i) hierarchical and territorial; (ii) network. In (ii) the bold lines indicate the Baekje ceremonial community of practice.

Engagement between Baekje leaders at Pungnab-Mongchon and those in the wider region was thus primarily point-to-point (also among those within the wider region), a network of relationships forged through communal ceremony and exchange within the central fortress. Numerous early states took just such a network form, whereby the pathways between locales were valued rather than any pure mass of territory (M.L. Smith, 2005, 2007; Mizoguchi, 2009). Early states often lacked the means to project coercive authority very far beyond their

core, at least not consistently or year round (Scott, 2009; 2017). The fact that settlements remain relatively small outside of the Pungnab-Mongchon Complex (Ch. 5) indicates that the regional population remains dynamic, and would have been hard to take control over (also see below). Strictly hierarchical schemes of central control (e.g. Song, 2010) are thus inappropriate; the Baekje interaction network was alliance based rather than coercive (Fig. 7-10); although actors at Pungnab and Mongchon clearly came to hold the strongest cards, having monopolized particular high value goods.

Historical records further hint at this state of affairs. Limited kingly power and conflict with nobles is a frequent theme in the Baekje Annals (Cho, 2006: 222), while the patchy records also indicate that Baekje had at least two main poles of power until the 5th century AD. Of eighteen named people or officials in the Baekje annals prior to AD 400 fifteen are either of the royal house or from a family/clan named Chin. People named Chin are commonly noted as either kin of the queen or the maternal uncles of kings (also Best, 2006: 52). Powerful queens and/or queenly lineages are also evident in Silla (Nelson, 1991; 1993b; 2017), while epigraphic evidence indicates multiple kingship and council based rule there until at least the 6th century (McBride, 2011; 2015). The idea of co-rule or council based decision-making among influential households or lineages within Pungnab, or including those from the extended network, thus has some precedent in the wider Korean context. Such possibilities are often overlooked due to assumptions that Baekje was structured like the Chinese imperial court, with a single strong king. However an organization composed of multiple more-or-less autonomous yet allied authorities is more in keeping with the archaeological evidence and the prevailing character of Mahan/LIA society.

Production and the extended community: mediation, stratification, and the extent of local autonomy

The ceremonial feasting culture at both Pungnab-Mongchon and in the wider region would have needed a near constant supply of food and material goods to sustain it. An extended community must have therefore supported Baekje's dominant community of practice. Multiple overlapping communities worked together in the same overarching project, with only a select few engaged in ceremony. Wenger (1998: 126-8) labels such networks as "constellations". Again, 'working together' in this context does not preclude relations of domination or status differences, but neither can such relations be assumed.

Some degree of social stratification is apparent in Early Baekje, with a narrowing of who was able to engage in ceremony and feasting, with the majority of households being excluded from obtaining status signifiers. Certain people had thus been able to create and maintain "bottlenecks" (Earle and Spriggs, 2015), either accruing goods or controlling their flow.

	Status Signifier Absent	**Status Signifier Present**
Production Absent	439 (434.5)	71 (75.5)
Production Present	10 (14.5)	7 (2.5)

Table 7-4: Cross-tabulation of the presences of production activity and status-reputational symbols in Protohistoric Early Baekje domestic contexts; expected values given in parentheses.

	Status Signifier Absent	Status Signifier Present
Production Absent	260 (258.6)	54 (55.4)
Production Present	6 (7.4)	3 (1.6)

Table 7-5: Cross-tabulation of the presences of production activity and status-reputational symbols in Protohistoric Early Baekje domestic contexts with transitional sites removed; expected values given in parentheses.

The correlation seen during the LIA between a house having status signifiers and being a locale of production activity, highlighted in section 7-i, was somewhat broken or deemphasized during the Early Baekje Period. Data from *all* Protohistoric Early Baekje sites (Table 7-4) still shows a statistically significant correlation, but a much weaker one than for the LIA (Phi = 0.136, p = 0.002, context n = 527). Yet this statistical significance disappears if LIA-to-Early Baekje transition sites are removed (Table 7-5 – Phi = 0.070, p = 0.211, context n = 323), indicating that the social prestige of artisanal work waned as social stratification emerged.

So what were regional authorities themselves actually bringing to the table? Various types of ceramics were certainly being brought to Pungnab (Ch. 6; Walsh 2017; Walsh et al 2019); raw or finished metals from nearby metal producing areas in Hwaseong (e.g. Kiandong) and to the east (see Song, 2013b) must have been also. Rice may well have been a significant good flowing into Pungnab, and did become a tax good during the Three Kingdoms Period (c. AD 300-668) (M. Kim, 2015: 849). High ubiquities of rice relative to other Early Baekje villages have been noted in Pungnab's ceremonial pits (H. Lee, 2010) and in houses at Yongin Gorimdong (Lee and Lee, 2016). The probability that rice was a core component of the Early

Baekje ceremonial feasting culture is therefore high (Kim, 2015), with a relatively small number of actors procuring much of it for use in communal ceremony.

Either regional authorities were acting as intermediaries, accumulating food and goods in order to engage in ceremony locally and at Pungnab (Fig. 7-10), or each centre (Pungnab, villages at Yongin etc.) was independently engaging artisans and farming communities. I argue that the evidence is far more congruent with the former case. The majority of Early Baekje communities appear to have had little-to-no access to status signifiers and were not engaged in the kinds of communal activities associated with the Pungnab-Monchon complex. If communities throughout the Han River Basin and Hwaseong area were dealing directly with community leaders at Pungnab we may expect a wider distribution of status goods and stylized serving vessels. Such goods are instead mainly focused in quite narrow areas of the landscape (Ch. 5), indicating that wider regional exchange of status and other goods was mediated by a narrow range of people (Fig. 7-10). Artisans and farmers were thus, to some degree at least, subordinate to those at Pungnab-Mongchon, Yongin, and other regional centres.

Yongin's geographic position goes some way to explaining why this area in particular was so heavily engaged in mutual exchange with Pungnab-Mongcheon. Yongin occupies a strategically important area, sitting at one end of the mountain passes between the Han River and Hwaseong; a natural bottleneck. Yongin is also at an intersection of watersheds, near waterways flowing both north and south. Individuals or groups in this area would have been able to oversee the movement of people and goods to and from Pungnab. Alliances between leaders at Yongin and those within Pungnab would have been of mutual benefit; status goods flowed to Yongin and reinforced their authority as mediators, while authorities in Pungnab received the foodstuffs and material items needed to sponsor ceremonial activity (and other

projects – see below). Multiple communities at Yongin were thus able to sustain extended networks that provided the items needed to engage with Pungnab while developing a ceremonial and feasting sub-community of their own (Fig. 7-10). This option was less available or necessary for local leaders to the north, along the Han River and its tributaries, where the river system facilitated direct individual links to Pungnab-Mongchon. Subsequently, feasting evidence is less prominent in those areas.

The goods brought to Pungnab-Mongchon by regional leaders could therefore be characterized as a form of tribute payment, payment allowing them to engage in ceremony, make alliances, and receive items status goods in return. Tribute is often described as *ad hoc* payments of a lump sum (Mair, 1977: 98; Wareham, 2012: 913), commonly involving some notion of return or facilitating exchange (Mair, 1977: 95-7; Dietler and Herbich, 2001: 244). Its payment is demanded, possibly with violent consequences for rejection (e.g. see Mair, 1977: 98), or as a theatrical/token public act of subordination to initiate some relationship (like the early Chinese tributary system; see Lewis, 2010: 145-6). In keeping with Baekje's decentralized and participatory community of practice, a small number of regional leaders provided foodstuffs and material items while gaining status goods (e.g. Chinese imports, glass beads, and later in time precious metals) and alliances with a powerful population centre, reinforcing their authority at home.

Authority in the wider region was thus still rooted in the creation and maintenance of exchange networks, yet the exclusivity of these social networks ossified into more stratified relationships. Farming hamlets saw the emergence of local leaders with control over a portion of agricultural storage located in above ground granaries/bins (Ch. 5), presumably as part of the extended community supporting ceremonial feasting. Local tributary relationships are therefore likely, either as payments in recognition of regional leaders' authority or to

participate in smaller scale feasting and alliance-making. Some form of bonded labour is also possible, with slave/war-captive labour attested to in LIA by the Chinese[16] and the need for labour possibly driving inter-polity raiding during the LIA and Three Kingdoms Period (Kang, 2000). Identifying bonded labour is difficult with the available data. However, other than being excluded from Baekje's political community of practice, any bonded labour appears to have led somewhat similar lives, using similar material culture, and in similar architecture to the regional leadership (Ch. 5).

How far village-to-hamlet relationships were fixed or fluid needs future investigation, but increased agricultural productivity and the intensification of wet rice farming (Yi, 2009a; Kim, 2015; also Ch.5) set the conditions for certain authorities to take control over producers. Rice grain is easily measurable, and the field systems needed to produce rice means that a population is more closely tied to a particular locale than for other types of crop. Many early states relied on the appropriation of grain from an easily monitored population (Scott, 2017), and it appears likely that Baekje's central and regional leaders were able to engage in similar behaviour.

Yet not all activities in smaller villages and hamlets revolved around sustaining the participation of political leaders in Baekje's feasting culture. While these hamlets had some person of authority administering a portion of storage, a great amount of foodstuffs were sequestered into pits that were placed away from the main settlement area or clustered within

[16] Part of the *Sangouzhi* records an incident where a defector from Jinhan to Lelang meets a Chinese boy who tells him that "1500 of us were cutting timber when the [Korean] Han attacked and captured us; our hair was all cut off and we were made slaves (我等輩千五百人伐材木，為韓所擊得，皆斷髮為奴)" (*Sangouzhi*, *Weizhi* Vol. 30, *Han zhuan*).

housing groups (Ch. 5). Smaller communities were therefore not under the complete control of Baekje's leadership, and thus were engaged in projects other than providing for the ceremonial feasting community. If, as B. Kang (2000) argues, labour was highly valued and sought after by LIA and Three Kingdoms Period polities then smaller producing communities would have had high bargaining power; too much pressure from local authorities risked people switching allegiance or simply leaving for other polities. Hamlet leaders may thus have arisen as community representatives to deal with regional authorities, organizing and administering the tributary or proto-tax payments[17] that secured their community's independence in other matters.

The situation appears to have been similar for communities producing ceramics, and therefore possibly also those engaged in metalworking. Ceramics were produced at multiple points in the landscape on a relatively small scale (Ch. 5), supplying the immediate community and other local people (Cho, 2006; Walsh, 2017). Parts of the Baekje feasting set, like BBP vessels, were also produced in multiple locations (Ch. 6), but were subsequently funneled to particular mediating communities or local leaders. As the Sohadong production site shows, artisans working with clay were not necessarily restricted to making any one type of item; some communities had a wide repertoire (see Ch. 6).

[17] "Tax" commonly refers to regular payments individuals have to make on specified dates or during particular transactions, demanding local registers and specialist collectors (Wareham, 2012; M. E. Smith, 2014: 19). There is no evidence for such a system spanning the whole region during Early Baekje. One reference from AD 406 does suggest taxes in grain were collected in the capital (see Best, 2006: 274); however it is hard to know whether these were formal taxes or were assumed as tax payments by later chroniclers.

Whether such items were provided as tax/tribute or specifically commissioned needs further investigation, although Baekje's contacts with Japan may give some hints. The *bu*/*bé* [18] system was adopted from Baekje by Yamato Japan in the 5th century (Hirano, 1977: 80-1; Barnes, 1987: 87), and initially took the form of a tribute system. Officers administered specific occupation groups that provided a certain amount of finished goods (Barnes, 2015: 378). A *bu*/*bé* was a term applied to existing and newly arrived occupation or technical groups that produced particular types of craft good (Hirano, 1977: 80-1; Inoue, 1977: 88-9). These groups were initially under the control of local Yamato clan chiefs (Inoue, 1977: 92), but were designated *bé* by the imperial court, coming under court control and bypassing local lords (Barnes, 1987). While the *bu*/*bé* system was clearly adapted into the local context (Barnes, 1987) it may have been preferred over the Chinese or Silla administrative unit, based on land, due to pre-existing similarities with Baekje's organization. Baekje's *bu* system likely came from a similar background, attempts by Baekje's emerging court (see below) to wrest control of production from local leaders while integrating the core region[19].

An exception to the above, whereby local leaders were directly associated with status good production, can be seen in Pungnab Fortress's Area 197. Here, in the residential space where meetings and feasts were held, there is abundant evidence for metalworking, both iron and

[18] *Bu* is the Korean pronounciation of the relevant Chinese character "部", while *bé* is the Japanese.

[19] The description of Baekje's *bu* system given in the 7th century AD Book of Zhou 周書 (Ch: *Zhou Shu*) includes a distinction between government offices (e.g. military, finance) and court functionaries, the latter of which mostly dealt with procuring certain items for the palace (e.g. swordsmiths, butchers). That the inner court offices were oriented towards procurement may also hint at the origins of the system being related to securing tribute from artisans and farmers for an emerging court.

precious metals (see Ch. 5). The specific items being made in and around this area of the fortress are unknown, but personal ornaments and ring-pommel swords often included gold or silver decorations (Fig. 7-11). Gold beads are also found elsewhere in the fortress. As nothing but debris is evident the exact situation is unclear, but artisans may have been attached directly to members of Pungnab's leadership were producing status goods. Alternatively, the people and households holding feasts and ceremonies were also producing status goods for exchange and/or for personal use. More work is required to address this issue, but the latter case would clearly be some remnant of LIA organization.

i ii

Figure 7-11: (i) decorated sword pommel from 4th-5th century Hwaseong-ri burial site at Cheonan, to the south of the study area (from K. Kim et al, 1991: Photograph 8-1, p. 76) (ii) gold pendent decorations from Mound Tomb No. 3 at Seokchondong (from S. Yi et al, 2015: Fig. 45, p. 77).

7-ii-ii: The LIA-Early Baekje Transition: leadership via the monopolization of diplomatic trade and fortress building

The Early Baekje period saw a fusion of LIA worlds of authority into a single axis dominated by an exclusive community of practice primarily concentrated at the Pungnab-Mongchon Complex. Yet during the LIA Pungnab was, effectively, just one village among many similar larger villages, although it was a village with intense interactions with the Chinese commanderies to its north (Ch. 4). What set the conditions for this hierarchisation, which concentrated authority and its material signifiers into a narrow community? What allowed some individuals to create certain bottlenecks, taking control over the flow and distribution of some valued resources? Firstly, the changing political landscape in the wider region forced contact with the Chinese authorities into fewer hands. Additionally, the organization of fortress building would also have created conditions for, or reinforced, the emergence of leaders and coordinators, especially during longer term projects like Pungnab's walls (see Ch. 5).

Missions to Jin 晉 China and emergent leadership

Missions from various Mahan groups to the Jin court at Louyang start being recorded from AD 276 (see Yi, 2009b: Table 1, p. 50), and must have necessarily taken a very different character from previous contact with the commanderies Lelang and Daifang. Trips to Lelang could have been made overland or via coastal hopping by boat; the latter of which may be more likely. Communities in the Han River basin were around 200km from the Lelang fortress, a trip that could be made in a week or two on foot but much more quickly by boat. As recorded by the Chinese at the time, thousands of Mahan people were making that journey (see Ch. 3), and while such trips would have been a significant investment the numbers able

to make the journey indicates that the ability to obtain such resources was not unduly restricted.

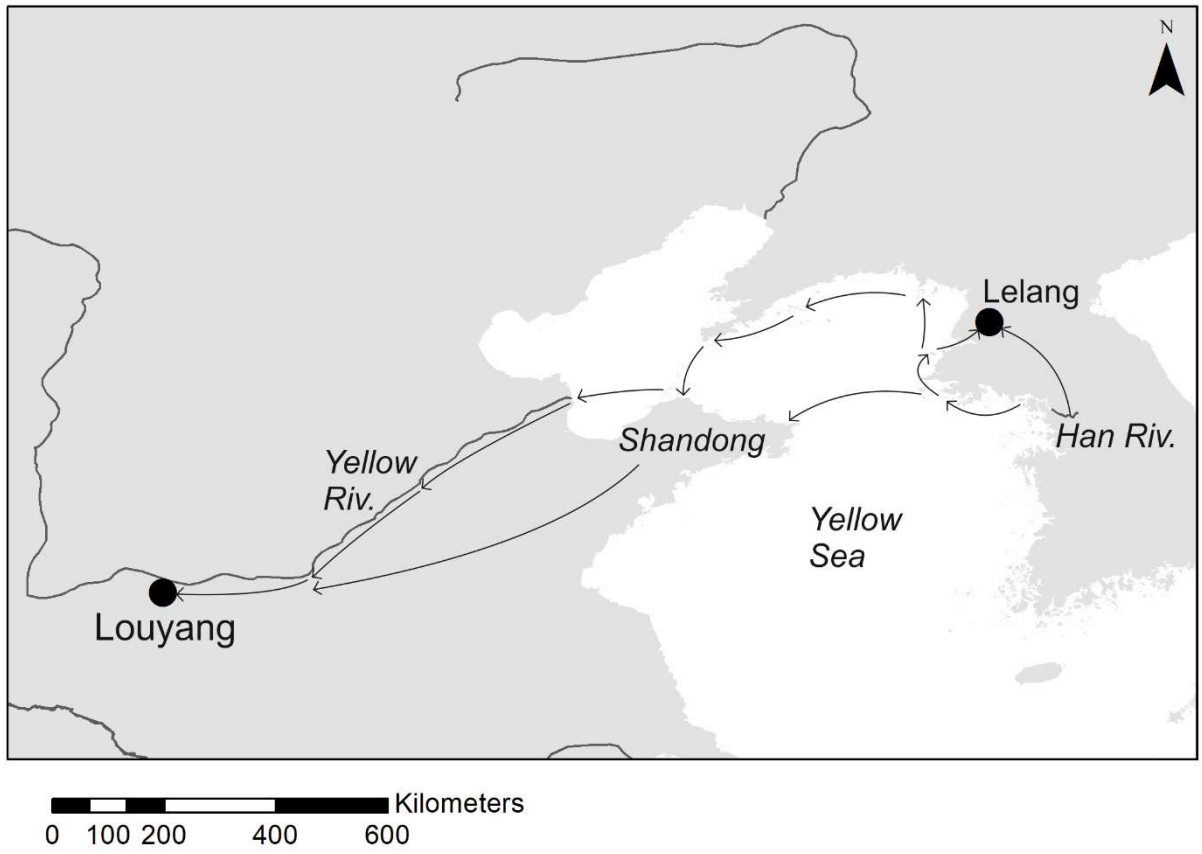

Figure 7-12: Probable routes taken by people in the Han River basin to Lelang and Louyang.

After the fall of Wei in AD 265 the commanderies on the Korean peninsula were largely powerless, forcing peninsular groups to deal directly with the Jin court at Louyang (Lee, 2013: 186). Missions to the Jin court would have been far more restrictive, requiring a long journey across the Yellow Sea to the Shandong peninsula or around the coast (see Schottenhammer, 2012: 64-5, 67; S-b. Park, 2016), and then travelling inland between 770-1000km up the Yellow River or overland (Fig. 7-12). Journeys would therefore have been in the order of months rather than weeks, and far fewer people could reasonably have made the trip. Dealing

with Jin thus demanded much more material and time investment, planning, coordination, and the participation of specialist navigators and translators. These missions were a very different kind of project to those of the LIA, requiring the coordination of more expansive social networks, which would have allowed mediators and leaders to arise and channeling Chinese goods through very few hands.

The need to reorient existing social projects towards making the long trips to the Chinese mainland placed Pungnab as a central trade/exchange node and centre for feasting in and around the Han River basin. Interactions with the Chinese authorities at Lelang/Daifang had played an important role in Mahan alliance networks (see above), and people at Pungnab village were in more intense relationships with those authorities relative to other communities (Ch. 4). Certain people at Pungnab were therefore in a key position to mediate and organize missions to the Chinese mainland, and the village's position on the Han River both put it at the centre of a network of riverine tributaries and gave access to the Yellow Sea. The waning of Lelang and Daifang left a vacuum and an opportunity for those with an understanding of Chinese culture and a background of more intense interaction with the Chinese authorities[20]. The monopolization of access to Chinese imports (at least on the local level) put individuals at Pungnab in a position to widen their alliance networks and cement their authority via intensified feasting and sponsorship of ceremony.

The development of feasting culture at Pungnab thus intensified as regional leaders cemented alliances with authorities at the fortress, in line with Mahan/LIA tradition. People in the

[20] Material evidence (e.g. at Kiandong, where Lelang tile and ironmaking technologies abruptly appear in the later stratigraphy – G. Kim, 2017) and Chinese texts suggest migration/refugees from Lelang in the 2nd and 3rd centuries AD (see Park, 2001a; Song, 2003)

fortress obtained the material means to send missions and fund ceremony while regional authorities gained access to now highly exclusive imported goods. Emulation or adoption of Chinese styles seen during visits to Jin ratcheted up the dining culture characteristic of the Early Baekje political community. Parallel opportunities to strengthen authority and access to status goods came for local leaders at Yongin and elsewhere, acting as mediators between local communities and those at Pungnab. They adopted the same material styles as their interlocutors, participating in a regional community of mutually beneficial alliances and exchange that supported missions to China and from which participants' social authority was derived. Over time distinctions between those with the means and knowledge to directly participate and those without ossified.

It has been argued by some authors that Lelang had adopted a strategy of intentionally keeping the various Mahan groups divided and thus weakened (e.g. Park, 2001b; Kwon, 2013; Lee, 2013: 180-1), but instead it may have been the organization of Mahan society that prevented a narrow and more permanent leadership class from emerging. The dramatic restriction in the availability of imported goods forced a change in the value of a particular field of LIA authority. The monopolization of high value trade goods by specific people, and the need to build alliance networks in order to fund long distance trade missions, thus intensified communal ceremony and incorporated multiple worlds of authority into a single axis. This new state of affairs need not have been an intentional plan by some central agents, but a byproduct in the shifting emphasis of social projects over time. The eventual dominant Baekje network, with Pungnab at its core, therefore formed partly due to the pre-existing relationships among LIA communities rather than through overt domination from the core or aggressive expansionism (similarly argued for Kofun Period Japan by Mizoguchi, 2009).

Fortress Building: reinforcing alliances and positions of authority

Of all Early Baekje period fortresses, Pungnab Fortress is the most important case study for understanding Baekje's emergence, being the earliest and most thoroughly investigated (although it will likely not be representative of other fortresses). The fortress walls were a grand long term project that required an annual mobilization and sustenance of up to 1000 workers over a decade or more. As noted in Chapter 5, the bulk of labour was mostly local, with the estimated population that probably resided within the walls providing enough workers for such a project.

The building work appears to have been more of a collaborative effort than a coercive one. The resulting settlement pattern, at least during the earlier phases of the fortress, mirrors that of the LIA, albeit with some evident stratification between informal 'districts' within the fortress. Despite an extent of social distinction, the open plan of the fortress interior facilitated high inter-visibility and interpersonal contact, indicating that residents were organizing themselves collectively rather than being directed by a sequestered elite (see Blanton and Fargher, 2016: 165-6, 181-5). Public ceremony and food consumption thus also likely played a role in integrating the local fortress population, maintaining alliances and community cohesion. The leadership roles of those involved in the emergent regional Baekje political networks would also have been reinforced. The tribute they received likely went (at least in part) to fund the wall building project, either providing food directly for workers or resources for alliance feasting. The coordination of the project therefore fell to these individuals or households, providing further opportunities to rise in local and regional esteem.

The initial phase of walls was therefore not some expression of state power, it was likely defensive. The building of Pungnab's walls began at a similar time, or a few decades after

missions to mainland China began, the later part of the 3rd century AD (see Ch. 5). Even though the last recorded Mahan mission to Jin was in AD 298, Pungnab would already have been established as a trade and ceremonial centre, attracting people, goods, and tribute from various regional leaders. Wealth and people were therefore concentrated at Pungnab, making it a valuable target for raiders. Early states, being foci of people and wealth, were often the victims of raiding, either for material plunder or slaves (Scott, 2017: 222-227), and various references to raids from the north and east are made in the earlier parts of the Baekje annals (Park, 2001a: 77, 82).

Wall building at Pungnab would therefore have been in the interests of both the residents of the village and regional leaders, whose alliances with people at Pungnab bestowed social authority and material status signifiers within their own communities. The emerging regional ceremonial community of practice was therefore further reinforced, fortress building and tributary/exchange networks becoming intertwined and mutually supporting. Mutual aid in building regional fortresses may also have been prevalent; the fortress at Gilseong-ri shows a blending of multiple construction techniques (Ch. 5), pointing to people from multiple locations and with disparate knowledge bases contributing to the project. Such relationships, again, would have reinforced an exclusive community of leadership, underwritten by their mutually recognizable competence and ability to participate in communal ceremony.

Wall building would have cemented Pungnab's place as a regional focal point for trade, ceremony, and authority; further solidifying distinctions among communities and setting the conditions for the later emergence of a state or paramount king. The largest community in the region building walls unlike anywhere else would have made an impression on visitors and those coming with tribute. It would have been hard not to have felt awe or admiration of the sheer scale of the fortifications, which in turn further bolstered the authority of Pungnab's

leading households/lineages. The community at Pungnab was not necessarily motivated by a desire to awe others, but awe was a probable response nonetheless. Furthermore, ceremony inside the walls amplified a sense of distinct community for both the residents of Pungnab and the people who made the journey to participate.

7-ii-iii: A Unitary Authority Emerges: kingship in the later 4th-to-5th century

Archaeological and textual evidence indicates that a king or paramount unitary authority emerged in the Han River basin during the later 4th and 5th centuries AD. Communal ceremony at Pungnab fortress changed dramatically, from small scale and sporadic to extremely grand, including animal sacrifice and the provision of large amounts of stylized ceramic serving ware and foodstuffs. Items from China, Japan, and other regions of Korea were also imported at renewed intensity (Kwon, 2002). Feasting thus moved away from residential districts towards a central point; ceremony became more rigidly organized and probably involved larger numbers of people at one time. Rather than the alliance feasts discussed previously, the scale and ostentation indicates what some call diacritical or tribute feasting (Hayden, 1996, 2001: 58; Dietler, 2001). Such feasts emphasize class and group boundaries, serving as settings not for reciprocal exchange but for display and redistribution of material wealth or symbolic items to the paramount's allies.

Such events will also stimulate emotional arousal, with intense sights, sounds, and smells, plus the physical presence of large numbers of other people. Periodic larger scale public spectacle and performance binds communities and reinforces identities, especially when much of the community resides away from the centre and maintains nominal autonomy (Inomata, 2006). The communities given physical presence here would have been much larger than during the earlier phase, and the generosity of the royal house and other elites

would have been a prominent theme. Some evidence suggests that emotionally aroused people rely more heavily on intuitive gut reactions (Tritt et al, 2013), making rhetoric supporting narratives of community integration and royal authority that much more effective.

More intimate communal feasting persisted in the newly constructed Mongchon Fortress, the probable site where the emerging king and royal court resided. Likely diplomatic gifts and exchange goods have been found within the fortress (Ch. 5), supporting the inference that the royal court, i.e. the kings recorded in both Chinese and Japanese texts, was located here. One lineage was thus not just the external 'face' of Baekje but was appropriating wealth and unambiguously personal foreign recognition[21]. In addition, the largest monumental step-tombs at Seokchondong also date to around this time (Ch. 5). These tombs were made to be seen, located in an area with earlier earthen or stone mound tombs yet of a distinctive form and scale. One lineage was thus able to mobilize the construction of a fortress set apart from the rest of the population, hold intimate feasts within that exclusive space, and probably orchestrate large scale redistributive feasts and ceremony.

Changes in the relationship between the authorities at Pungnab-Mongchon and elsewhere are also evident, apparently taking a more formally top-down orientation. Specific work is required to examine these issues in more detail, but it appears that local leaders were probably dealing with central officials in stone-walled fortresses rather than directly with the centre. These stone-walled fortresses were places where feasting and ceremony was held, and their locations on low hills allowed the monitoring and control of movement through valley

[21] The Chinese court bestowed multiple titles upon contact with Baekje in AD 372, including "King of Baekje (see Best, 2006: 72), while diplomatic exchanges with Japan were peer-to-peer, between "kings" (see Hirano, 1977).

routes (see Ch. 5). Authorities within the stone-walled fortresses were therefore taking on a control and administration role; moving away from a network of autonomous tributaries and towards a system of monitoring and control (more like Fig. 7-10i). The fact that communities at Yongin stop holding public ceremony also speaks to heightened control, integration, and monopolization of certain activities by the centre.

Textual evidence also hints that the earliest Baekje kings had limited roles prior to the 5th century AD. In various cases, kings of city states (e.g. Yoruba, Mesopotamian city states) took on more symbolic roles as representatives in war and diplomacy, with domestic affairs ruled by council or consensus (Stone, 1997). In the latter half of the 4th century diplomacy with both Japanese (Yamato) and Chinese courts was carried out in the name of the Baekje king, possibly before or as Mongchon fortress was being built. The two kings appearing in the earliest historiographically secure sections of Baekje Annals[22], Keunchogo (AD 347-375) and Keungusu (AD 375-384), were also war leaders. Five references regarding leading armies are made for these two kings, with three lead personally by the king or crown prince (and one being possibly lead by the king). Further, 73% of entries regarding the kings' activities relate to either military (e.g. leading troops, building fortifications, inspecting troops) or diplomatic actions. This was a period of prolonged conflict with Goguryeo to the north, which may account for this pattern; yet an administrative role for the king appears to be largely absent.

Following Keungusu and into the 5th century the role of kings changed. Kings took on a more administrative role, and the king or members of the royal line rarely led armies. Appointing

[22] Formal records were not kept until the later part of the 4th century (Best, 2006); entries from prior to this period are not secure enough to rely upon (see Ch. 3).

ministers, overseeing non-military construction projects, and leading ritual now take up a third of entries (versus one-fifth for the earlier two kings). In addition, only two of nine armies were led by the king during this period; instead, the entries specify the king as ordering generals to lead. Indeed, the two instances where the king personally led refer to the same king, Asin (AD 392-405). This king only rode out with the armies after multiple other attacks had been defeated, indicating that only in crisis would a king now go into battle. Into the 5th century then, the Baekje royal court took on a more bureaucratic and governmental nature, mirroring the changes seen archaeologically.

It was likely the wars with Goguryeo and the opening of diplomacy beyond the Korean peninsula that demanded more administrative control and provided the opportunity to extend the royal lineage's authority. Kings Geunchogo and Geungusu were the first Baekje kings recognized by the Imperial Chinese court, and personally led military campaigns on multiple fronts (also see Lee, 2019). International recognition and prowess in war would have provided heighted authority for these kings, providing justification for colonizing other areas of administration. Centralization, expansion of bureaucracy, and the establishment of formal government also appears to have occurred during the reign of Geunchogo. The beginning of formal court recordkeeping is attributed to him, and implies the adoption of more formal administrative governance (see Best, 2006: 63, 77-8) and therefore more centralized court power hereafter[23].

[23] In the Baekje Annals the institution of a bureaucratic system with sixteen ranks, modelled on the Chinese government, is attributed to King Koi (trad. AD 234-286) in AD 260. However these ranks are not attested to in Chinese records until the 7th century and the named ministerial positions are not seen until the 10th century (Best, 2006: 42). Ministerial positions are mentioned in 5th and 6th century Japanese records concerning Baekje, mirroring institutions common in China until the 6th century

Baekje's origin myth, seemingly adopted during the 4th century AD, also highlights the growing centrality of the royal lineage, linking them to a heroic ancestor and the prestigious ancient state of Buyeo[24]. State leaderships commonly invent mytho-historical narratives to stabilize and sustain themselves (Byington, 2016: 279-80), and Baekje was no different. The Baekje origin myth[25] clearly derives from the Goguryeo myth, the protagonist being the founder of Goguryeo's son. In turn, Goguryeo's leadership adopted their story from Buyeo at some time during the 3rd or 4th centuries (Gardiner, 1988; Grayson, 2001; Noh, 2004). The Baekje royal line must therefore have adopted the story after Goguryeo had, i.e. during the 4th or 5th centuries. Noh (2004: 11-14) argues that Goguyreo's royal line adopted the story partly to centralize a more diffuse power structure, minimizing the status of other aristocratic families and gaining prestige via links to an ancestor with divine origins. The Baekje myth served a similar purpose, even if the route to Buyeo is less direct. Finally, claimed descent from Buyeo not only established the prestige and right to rule of the Baekje royal line, but also put Baekje on par with Goguryeo in regional diplomatic interactions (Byington, 2016: 274-77, 301-4).

An archetypal autocratic 'king' therefore did not arise in Baekje until the later-4th century AD

(Best, 2006: 43-6). Formal bureaucratic offices were thus most likely established during the later 4th or 5th centuries.

[24] Buyeo existed in Manchuria (modern day China's Jilin province specifically) from the 3rd-2nd century BC until the 5th century AD. Buyeo was an ally of Han China (i.e. not subordinate to), and the only Manchurian/Korean polity to have had a king formally recognized by the Chinese court prior to the 3rd century (Byington, 2016: 188).

[25] See Lee (1993) or Best (2006) for English translations of the Baekje origin myth.

at the earliest. It is from this period that the trappings of a centrally administered state with a more formally hierarchical mode of organization can be identified. Prior to this period a royal line likely existed, although it would have been limited in its authority and counter balanced by other regional leaders and their networks of alliances. Veneration of the royal line through monument building, myth-making, and elaborate feasting speaks to a radically different political organization than the smaller scale and more distributed activities of the earliest phase of Baekje. What was a community of practice made up of multiple competing households or communities came to be colonized by a single actor, the royal clan. Competence in war and diplomacy opened up opportunities and justifications to expand their authority and subordinate other regional leaders.

7-iii: Broader Implications: comments on studying state formation

The formation of a state will almost always be a gradual unfolding of social projects carried out by communities with shifting memberships and aims over time. A teleological view that sees the state as the final form of a polity and works backwards risks circularity and the erasure of important historical context. Assumptions about how a state was organized may be erroneously projected back into the antecedent situation; for example conflating a fortress being built as a royal capital with its gradual becoming part of an eventual royal capital. Investigating and following the unfolding projects and social institutions operating prior to state formation yields a richer representation of social and historical process, and what past people's lives were like. What changed, what was conserved, and the potential triggers for any changes can therefore be delineated free from any assumptions about what 'should' be going on within a polity.

A situation more specific to Korea, although likely applicable to other contexts also, is the

presence of textual evidence, the content of which colours interpretation of the archaeological material. Scholars of Korean archaeology often keep in mind established historical narratives when interpreting archaeological patterns (Ju, 2009: 117; Kim, 2012; Blackmore, 2019: 109-110), often leading to early states' myths being studied as reflecting real historical events (Byington, 2016: 279). Similar paradigms prevail elsewhere in the world also (see Trigger, 2006: 261-278). An overemphasis on the power and activities of kings and nobles is one result of the primacy lent to the textual record. Another consequence is the high probability of assuming state functions earlier than they may actually have existed, especially in cases where myth, legend and later historical events have been combined and projected back to create a mythical past (as is likely for the early Baekje Annals – Ch. 3). Suppositions about how the state was organized will further impact interpretation of the archaeology, further seeing the material through a lens of what the state 'should' have been doing.

Archaeological evidence is often far less fine grained than documentary accounts, but potentially offers a broader perspective on socio-political organization and process. Such evidence can represent the activities of more members of more communities than textual accounts written after the fact and/or by a small literate class. Long term social projects and institutions that texts may downplay or omit may be studied, some of which may have important implications for how we understand a state's governing structure or how a state formed.

Still, the archaeological material offers just fragments, so not all activities, interactions, or institutions will have left material remains; certain facets of any past community's activities will thus be unavailable to us in the present. Yet, while the absence of evidence is not necessarily evidence of absence, at some point the evidence as currently available needs to be the basis for models of the past. Assuming that evidence for certain activities or institutions

will eventually be unearthed again risks making accounts of the past based on what investigators think should be the case rather than being fully grounded in the available data. Some suppositions may be reasonable, and further work will prompt modification or support existing ideas, but interpretations grounded in the evidence as available at the time are also valid. A plurality of views that embrace the inherent ambiguities in studying the past will open up new avenues for future questions and research (Gero, 2007).

Finally, this thesis has demonstrated the utility of identifying and examining social institutions (both formal and informal) and projects to state formation studies[26]. Studying such projects not only gives a view into the activities of past people and communities, but also offers rounded insight into social process, highlighting what relationships and facets of social organization change or are conserved through time. Furthermore, approaches such as heterarchy and collective action offer valuable alternative ways of investigating social projects and institutions. Both emphasize the actions and agency of broader segments of any population, and the model of heterarchy offered here facilitates the identification of various axes of authority or more diffuse socio-political power structures. Multi-scalar analysis examining a variety of evidence types complements such approaches well, and has proven its utility here by highlighting the persistent heterarchical features present in Early Baekje social relationships on both the regional and village levels. A richer and more nuanced view of LIA central Korea, Baekje, and the formation of the Baekje state has thus been presented, encompassing multiple communities and their goings on, from grand fortresses to tiny hamlets.

[26] I have also stressed the need to take such approaches in Korean archaeology more generally elsewhere (Blackmore, 2019: 112-114).

Chapter 8

Conclusions

Archaeologists need models of alternative forms of authority and complex social organization, models which need detailed development in order to overcome the hegemony of hierarchical thinking. To that end, this thesis has identified the main features of heterarchy, outlined a model of socio-political heterarchy and its foundational principles, and developed an archaeological approach to identifying and investigating heterarchy through past material culture.

Heterarchies are multi-dimensional and poly-centric, where no value or individual is paramount. People will thus have multiple ways to accrue authority, be that through skill in crafting, trade, warfare, or esoteric ritual. Individuals may specialize in one kind of activity or develop a broad base, but none will consistently have a qualitatively higher social rank over the others. Social authority is therefore situational, based on individual judgement and context. Individuals must continually work to demonstrate their competence and abilities, obtaining or making relevant material signifiers, hosting feasts, performing ceremony, etc. Relationships among actors are thus decentralized or horizontal, with limited (consistent) chain-of-command and much interaction based on face-to-face interaction where evaluative judgments of partners or authorities can be made. Finally, heterarchies have high adaptability to changing social or environmental conditions, with inter-personal ties being fluid and context dependent. Should one frame of value or source of authority become unsustainable (e.g. by environmental change, conflict, the collapse of a trade route) others will be available. People's autonomy to switch among leaders or values facilitates this flexibility, and means populations within heterarchies are likely to be highly dynamic.

Acknowledging the possible (or probable) roles of heterarchical principles in complex societies' organization and historical trajectories offers a more nuanced view of state formation and the modes of authority within complex polities. This thesis demonstrates the key importance of understanding the historical context and background from which a state forms. Taking the state and working backwards to find origins risks a teleological view; understanding the modes of authority and historical contexts preceding state formation and following these principles and social institutions forwards enables a richer account of past processes and peoples' lives. Projects like walls or grand tombs cannot be taken as markers of the state or a sovereign authority in the absence of an understanding of how such projects were organized within the local context. The markers of hierarchical organization are well developed; the markers of socio-political heterarchy worked through in this thesis allow the identification and understanding of alternative modes of complex social organization, and thus account for their development through time.

In this thesis I tested textual and archaeological data from early 1st millennium central Korea against my model of socio-political heterarchy. Late Iron Age Mahan communities in the Han River basin and the subsequent Early Baekje state were both revealed to have had previously underappreciated heterarchical elements in their organization. Early Baekje was revealed to have been a network of autonomous social leaders, with decentralized production of even prestige ceramic wares and varied local preferences for and uses of particular styles. More centralized administration emerged only in the later 4th or 5th century.

Evidence from the Late Iron Age conforms tightly to the expectations of heterarchy at both settlement and regional scales, indicating that Mahan social organization had strong heterarchical tendencies. Textual evidence shows both leaders and non-leaders had high autonomy in terms of who they allied or traded with, while leadership positions appear self-

declared or by some common recognition. Dynamism in inter-community alliances and polity identities also indicate fluidity in group ties and social authority.

Mahan people lived in relatively small villages or hamlets made up of one or more house clusters that each appear to have been generally autonomous. Domestic architecture was broadly similar, and differences among house clusters and settlements in terms of access to status signifiers and feasting intensity were a matter of degree and not class. Food storage was managed by individual households or house groups, while varied types of crafting activities were happening on many sites in the region. Diverse status-reputational symbols are also identifiable, including various types of bead (glass, jade, agate), pottery (or the contents therein) imported from Chinese outposts, and bronze ritual items. There were thus multiple centres and types of centre both within settlements and on the regional scale.

Multiple worlds of authority were shown to have been salient within Mahan communities, and they were thus not chiefdoms by any prevailing definition. Different authorities often coexisted in the same village or hamlet, with no one having any consistent higher social rank. Crafting competence, ritual knowledge, or a position to mediate longer distance exchange were all apparently routes to social authority, each associated with distinctive material culture (respectively, crafting evidence and glass/jade beads, bronze bells, and Lelang style ceramics, agate/amber beads). However such activities were only routes to authority in as far as they facilitated the creation of interpersonal networks, networks particularly supported by travel along the Han River and its tributaries.

Such patterns appear to contrast with other areas of the wider region at this time. For instance, in parts of Yayoi Japan elite compounds with walls/ditches and storage houses emerged. To the north, Goguryeo had multiple named noble families, each with socially subordinate

commoners and slaves; elaborate step tombs and other material culture demarcated these elites. Finally, China was, for most of this period, dominated by a bureaucratic state with explicit ranks and sumptuary laws dictating what people may wear or consume. In the wider region then, more-or-less singular paramount lines of authority were established or coming into being.

The more fluid authority relations of Mahan and the multiple bases of authority supporting them are evidenced by both intra-household and public feasting. Feasts were relatively small scale, with serving ceramics concentrated primarily within households or distributed around individual household clusters. Such evidence reflects alliance-making or work feasts, tightening/reinforcing peer-to-peer bonds. In these settings the relevant material culture acted as costly signals, reflecting nominal competences and the ability to access particular social exchange networks or knowledge bases. In turn, participants could make their own evaluations and autonomous horizontal alliances.

Feasting was most intense within the households of artisans and/or those that had access to the various status signifying goods. Alliances were thus probably made, through feasting, among those of authority and between people of authority and others within the settlement or surrounding area. In the former case status, competence and trustworthiness could be mutually signaled and assessed. Inter-village relationships were likely the most important here, where different authorities negotiated exchange and alliances. In the latter case feasting could have been a means to demonstrate social authority to other members of the local community, followers or other people that did not have authority themselves or were bound to local leaders by kinship and other ties.

I have argued that several parallel authorities thus counterbalanced each other, making a

distinction between more common peer-to-peer feasts within households and public feasts, which were restricted to certain larger settlements. The former occurred in both larger villages and hamlets, involving the consumption, display, and/or exchange of beads, exotic goods or foodstuffs, and craft products. Public feasting was limited to particular larger villages with resident ritual specialists. Two parallel types of authority may thus be identified, secular and ritual, as hinted at in relevant texts where ritual specialists were appointed by common assent. Public feasting still remained localized in and around household clusters; however, one possibility is that the secular authorities sponsored periodic public ritual and feasting, making ritual and secular authorities interdependent. Both were able to raise their esteem via negotiated co-action. Social authority and asymmetric relationships would also have been justified, with public food consumption providing another arena for displaying status-reputational symbols, knowledge, and the ability to accumulate and share resources.

Trends towards more centralized authority and emerging, more permanent, ruling sub-community leadership are evident during the Early Baekje period, although certain elements of the preceding heterarchical organization remain obvious. The transformation of the village of Pungnab into a fortress and primary population centre indicates a concentration of political authority within that site. Yet the organization of wall building and internal fortress organization retained heterarchical characteristics, being primarily a local project shared among households within an open-plan settlement.

Still, access to a narrower range of salient material status signifiers gradually became more restricted, with communities at Pungnab and several villages at Yongin able to effectively monopolize status items (e.g. beads, imported ceramics, black burnished pottery). These two locations were also centres for feasting and ritual, with local leaders apparently travelling to pay tribute, exchange, and participate. Away from the political centres, solidifying social

hierarchy meant the residents of particular house clusters took control over pubic food storage. The 5th century emergence of hilltop fortresses, which monitored the surroundings and projected central authority into the regions, also reflects hierarchical organization and administration. The building of Mongchon fortress as the probable seat of a royal lineage further underlines these tendencies.

Yet broad aspects of heterarchy remained. Within the Han River basin the distribution of authority was bi-polar, concentrated at Pungnab and several villages in Yongin. In its earliest phase (late 3rd to the end of the 4th centuries) the polity of Baekje was therefore likely to have been a broad alliance network rather than a territorial state. Production activity, particularly of prestige black burnished pottery (BBP), also remained broadly distributed rather than under centralized control. Artisans on multiple production sites made BBP concurrently with other wares, and were either in exchange relationships with partners on multiple other sites or with particular actors that themselves participated in feasting and exchange involving people from across the region. Autonomy for residents of particular villages/hamlets remained high. In the earliest phase feasting activities remained primarily within the purview of individual households, even as public ritual was occurring at Pungnab. Settlements also remained open plan with high intervisibility, and in smaller hamlets and villages food storage remained non-public and therefore likely under the control of residents.

After Lelang's importance waned from the mid-3rd century the need to organize and supply long-distance tribute/trade missions to the Chinese mainland provided opportunities for a narrower range of people to take control over such missions. Access to foreign imports was thus restricted, allowing certain people to take positions as gatekeepers. Pungnab Fortress grew at the centre of this bottleneck, a Late Iron Age village that had a strategic riverside positon and pre-existing interactions with Chinese authorities more intense than the average

village. Various individuals from villages at Yongin were also able to manage positions as mediators between Pungnab and Hwaseong.

During the earliest phase of Early Baekje authority remained multi-centric, whereby various people of authority within Pungnab and across the region continued to engage in peer-to-peer alliance making. Similarly with the Late Iron Age, individual regional leaders were participating in alliance networks to secure access to certain status goods, while the various authorities at Pungnab gained tribute and the supplies needed to organize missions. Distributed production patterns underline how local leaders were procuring (or making) items locally to participate in regional alliances and exchange.

Communal food consumption remained the key setting mediating and sustaining this network of alliances, with a sub-community crystallizing around a specific set of practices that used a particular material set. Feasting used a particular stylized ceramic serving set and, while public, remained smaller-scale. Public ritual involved the deposition of items including intentionally broken or deformed jars, and at Pungnab took place in a ritual space overlooked by a probable shrine. However, again, ritual remained relatively small-scale in terms of pit size and amount of material deposited per event. A distinct community of practice thus developed, with the ability to procure relevant material and knowledge of its proper use allowing participation, even where formal social boundaries may have been absent. The items and knowledge needed to participate in this sub-community therefore acted as a secondary bottleneck, restricting further the kinds of people that could manage the social ties and resources needed to take part.

The building of Pungnab's walls took place within this organizational *milieu*; a 10-20 year project of the late 3rd-early 4th centuries, primarily undertaken by Pungnab residents and

people migrating towards that centre, supported by alliance and tribute payments. Work feasts and ritual, presumably headed and funded by various leading households, would have integrated and bonded Pungnab's residents. The walls and the process of their construction enclosed a community, and would have made a strong impression on the people coming into the fortress to participate in feasting/ritual. Pungnab's leading groups' central position in alliance networks was thus further reinforced, although internally the fortress remained open-plan and public activity was on a smaller household or district scale. The building of the fortress was therefore not an expression of some royal or hierarchical authority, but did reinforce the authority of exiting leaders and set up conditions that allowed a future unitary authority to arise.

Baekje's earliest phase clearly maintained important heterarchical aspects, however into the late 4th-early 5th centuries a unitary authority with a self-aggrandizing ideology and more centralized administration did emerge. Feasting and ritual moved away from households and smaller scale interaction and into the ritual space at the centre of Pungnab, with mass consumption and deposition of serving ceramics, status signifiers, and probable animal sacrifice. Rather than disparate personal alliances there were now mass gatherings that demonstrated the royal family's generosity, power, and bonded participants into a wider community. A separate royal residence was built in the form of Mongchon Fortress, and large step-tombs constructed. These step-tombs, resembling those from Goguryeo, gave materialization to the Baekje royal line's foundation myth, adopted during the 4th century; in it, links to a heavenly progenitor via Goguryeo's royal family were claimed, granting legitimacy and downplaying the roles of other sources of authority.

The Baekje royal clan, or what became the royal clan, was likely one of the leading groups during the earlier phase, as a diplomatic figurehead and/or war leader. By the later 4th century,

as Baekje's international relations with Chinese and Japanese courts opened, a king/leader was therefore already established as a figurehead, diplomacy being carried out in his name. Written records also indicate these early kings (and their sons) as having personally led military campaigns against Mahan and Goguryeo. These activities provided prestige and authority to the royal line, while intense conflict with Goguryeo would have justified the need for a leader and more centralized administration. The opportunity to accrue authority was clearly not passed up by the royal line. The personal skill (political and military) and long reign of King Geunchogo also provided the stability needed for one specific actor to build authority and lock-in alliances through the prevailing peer-to-peer networks.

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Appendix 1: Site Descriptions and List of Relevant Reports

Fortress Sites

- Banweolsan Fortress

Location: 37.89491, 127.21827

Period: Early Baekje

Description

Stone-walled fortress encircling the crest of a low mountain, located in a more mountainous area near a tributary of the Imjin River. No Early Baekje structures were uncovered but pits datable to Early Baekje were identified associated with the walls. Greywares, including stylized serving vessels, were the bulk of the finds.

Relevant Excavation Reports

Park, K., Seo, Y., Park, S., Kim, B. (1997) *Excavation Report of Pocheon Banweolsan Fortress, 2nd Phase*, Department of History, Danguk University : Seoul

Park, K., Seo, Y., Kim, H., Bang, Y., Jeon, B. (2004) *Pocheon Banweolsan Fortress: Collated Reports*, Danguk University Research Institute for Buried Cultural Property: Seoul

- Gilseong-ri

Location: 37.11825, 126.97069

Period: Early Baekje

Description

An earthen walled fortress located on the Hwaseong plain. Walls were approximately 2300m long, built to exaggerate natural ridges and utilizing multiple construction techniques. Thus far only minimally excavated but features include house and four-post storage structures. Finds include plain earthenware and decorated greyware. One kiln has also been identified within the walls.

Relevant Excavation Reports

Hanshin University Museum/Hwaseong Cultural Center (2010) *Hwaseong Gilseong-ri Earthen Fortress I*, Hanshin University Museum: Osan

Jungbu Institute for Archaeology (2013) *Hwaseong Gilseong-ri Earthen Fortress II*, Jungbu Institute for Archaeology: Anyang/Weonju

- Mongchon Fortress

Location: 37.52195, 127.12284

Period: Early Baekje

Description

A fortress located around 1km from Pungnab Fortress next to the Han River. Earthen walls of about 2300m in length were built on natural low ridges in the landscape, encircling a relatively low density settlement. Key features include two artificial ponds, a pavilion next to one of the ponds, and multiple deep storage pits. Finds include greyware vessels for both

storage and serving, imported pottery, and other items, including a gilt bronze belt buckle of Chinese style.

Relevant Excavation Reports

Kim, W., Im, H., Im, Y. (1987) *Mongchon Earthen Fortress*, Seoul University Museum: Seoul

Kim, W., Im, H., Park, S-b. (1988) *Mongchon Earthen Fortress*, Seoul University Museum: Seoul

Kim, W., Im, H., Park, S-b., Choi, J. (1989) *Mongchon Earthen Fortress*, Seoul University Museum: Seoul

Seoul Baekje Museum (2014) *Summary Excavation Report for Mongchon Earthen Fortress Wooden Fence Re-installment Work Area*, Seoul Baekje Museum: Seoul

Seoul Baekje Museum (2016) *Mongchon Earthen Fortress I*, Seoul Baekje Museum: Seoul

- Myeokjeolsan Fortress

Location: 37.65626, 126.73284

Period: Early Baekje

Description

Small earthen walled fortress located on top of a ridge next to the Han River. Walls were around 300m in length. Excavation revealed a cluster of 8 buildings on top of the ridge. Finds included decorated greywares, including stylized serving wares.

Relevant Excavation Reports

Gyeonggi Provincial Museum (2005) *Goyang Myeokjeolsan Site: Report from Rescue Excavation*, Gyeonggi Provincial Museum: Yongin

Central Institute of Cultural Heritage (2014) *Goyang Myeokjeolsan Site I*, Central Institute of Cultural Heritage: Seongnam/Daejeon

- *Pungnab Earthen Fortress*

Location: 37.53476, 127.11621

Period: Late Iron Age – Early Baekje

Description

Late Iron Age village located on the alluvial plain next to the Han River, with evidence of three house clusters uncovered thus far. Contexts contained both plain earthenware and decorated greywares; and multiple houses contained styles that were non-local to the area (Lelang-style pottery, styles from the southeast of Korea area). A feature made up of three concentric ditches is associated with the residences, but around 450m removed.

In Early Baekje a large set of earthen walls was built, estimated at 3500m in length. Large numbers of houses accompany pavilion structures, storehouses and a potential 'shrine'. A ritual centre with a great many pits accompany the shrine building, later replaced by a very large and deep oval pit in the same spot where prestige and imported pottery, plus animal remains, were deposited. Both a kiln and metalworking evidence have been found, including

possible gold or gilt work.

Relevant Excavation Reports

National Research Institute of Cultural Heritage (NRICH) (2001) *Pungnab Earthen Fortress I*, NRICH: Seoul

National Research Institute of Cultural Heritage (NRICH) (2002) *Pungnab Earthen Fortress II*, NRICH: Seoul

Lee, N., Kwon, O-Y., Lee, K., Lee, M., Shin, S., Han, J. (2003) *Pungnab Earthen Fortress III*, Hanshin University Museum: Osan

Kwon, O-Y., Kwon, D., Han, J. (2004) *Pungnab Earthen Fortress IV*, Hanshin University Museum: Osan

National Research Institute of Cultural Heritage (NRICH) (2005) *Pungnab Earthen Fortress V*, NRICH: Daejeon

Kwon, O-Y., Han, J. (2005) *Pungnab Earthen Fortress VI*, Hanshin University Museum: Osan

Kwon, O-Y., Kwon, D., Park, J. (2006) *Pungnab Earthen Fortress VII*, Hanshin University Museum: Osan

National Research Institute of Cultural Heritage (NRICH) (2007) *Pungnab Earthen Fortress VIII*, NRICH: Daejeon

Seoul Museum of History/Hanshin University Museum (2008) *Pungnab Earthen Fortress IX*, Hanshin University Museum: Osan

Seoul Museum of History/Hanshin University Museum (2009) *Pungnab Earthen Fortress X*, Hanshin University Museum: Osan

National Research Institute of Cultural Heritage (NRICH) (2009) *Pungnab Earthen Fortress XI*, NRICH: Daejeon

Seoul Baekje Museum/Hanshin University Museum (2011) *Pungnab Earthen Fortress XII*, Hanshin University Museum: Osan

National Research Institute of Cultural Heritage (NRICH) (2012) *Pungnab Earthen Fortress XIII*, NRICH: Daejeon

National Research Institute of Cultural Heritage (NRICH) (2012) *Pungnab Earthen Fortress XIV*, NRICH: Daejeon

National Research Institute of Cultural Heritage (NRICH) (2013) *Pungnab Earthen Fortress XV*, NRICH: Daejeon

National Research Institute of Cultural Heritage (NRICH)/Seoul Baekje Museum (2014) *Pungnab Earthen Fortress XVI*, NRICH: Daejeon

Seoul Baekje Museum/Hanshin University Museum (2015) *Pungnab Earthen Fortress XVII*, Hanshin University Museum: Osan

Seoul Baekje Museum/Hanshin University Museum (2015) *Pungnab Earthen Fortress XVIII*, Seoul Baekje Museum/Hanshin University Museum: Seoul/Osan

- Seolbongsan Fortress

Location: 37.28690, 127.41870

Period: Early Baekje

Description

Stone-walled fortress encircling the crest of a low mountain, located in a more mountainous area in the South Han River Basin. No Early Baekje structures were uncovered, but multiple pits datable to Early Baekje were found associated with the walls. Greywares, including stylized serving vessels, were the bulk of the finds.

Relevant Excavation Reports

Park, K., Seo, Y., Bang, Y. (2001) *Excavation Report of Icheon Seolbongsan Fortress, 2nd Phase*, Dandeok University Heritage Research Institute: Seoul

Village Sites

- Balan-ri

Location: 37.12995, 126.90545

Period: Late Iron Age – Early Baekje

Description

A large village with 98 identified houses located on the Hwaseong plain. The village was made up of four broad housing clusters using both plain earthenware and decorated greywares. A small amount Lelang-style pottery was also found here. Several post-structures were identified. Finally, metalworking evidence was also discovered.

Relevant Excavation Reports

Gyeonggi Cultural Foundation (2007) *Hwaseong Balan-ri Village Site*, Gyeonggi Cultural Foundation: Suwon

- Cheonggye-ri

Location: 37.19767, 127.09682

Period: Early Baekje

Description

A large village located on top of a low hill accompanying a pottery-making site at the base of the slope, including workshops, kilns, and large waste pits. In total 117 structures were

identified. The assemblage was relatively mundane, primarily utilitarian greywares. Evidence from the kilns suggests some artisans on the site were specialized towards making very large greyware storage pots.

Relevant Excavation Reports

Hanbaek Cultural Research Institute (2013) Hwaseong Cheonggye-ri Site, Hanbaek Cultural Research Institute: Seoul

- *Daeseong-ri*

Location: 37.68395, 127.37936

Period: Late Iron Age

Description

Village located on an alluvial plain next to the North Han River. Multiple housing clusters and part of a palisade wall have been identified. Glass beads, jade beads, and Lelang-style pottery are relatively common on this site. Evidence of metalworking was also present in multiple house clusters. Finds also include both plain earthenware and decorated greyware.

Relevant Excavation Reports

Gyeonggi Cultural Foundation (2009) *Gapyeong Daeseong-ri Site*, Gyeonggi Cultural Foundation: Suwon

Gyeore Institute of Cultural Heritage (2011) *Gapyeong Daeseong-ri Site II*, Gyeore Institute of

Cultural Heritage: Goyang

- *Hangsa-ri*

Location: 37.79471, 127.36736

Period: Late Iron Age – Early Baekje

Description

Village made up of at least four housing clusters located on alluvium next to a tributary of the North Han River. Plain earthenware was the mainstay of the assemblage, even into the Early Baekje Period. Jade, glass, and agate beads were identified across the site, while metalworking evidence was also identified within one house cluster.

Relevant Excavation Reports

Korea Institute of Heritage (2010) *Gapyeong Hangsa-ri Site*, Korea Institute of Heritage: Seoul

- Jajak-ri

Location: 37.86604, 127.17239

Period: Early Baekje

Description

Village located next to a tributary of the Imjin River. Includes 30 houses, one four post-structure, and a likely pavilion. Assemblage primarily decorated greywares, with a minority being stylized serving vessels.

Relevant Excavation Reports

Gyeonggi Provincial Museum (2004) *Pocheon Jajak-ri Site I: Rescue Excavation Report*, Gyeonggi Provincial Museum: Yongin

Giho Culture Heritage Research Center (2015) *Report on the Excavation of Jajak-ri Site in Pocheon*, Giho Culture Heritage Research Center: Anseong

- Janghyeon-ri

Location: 37.72664, 127.19470

Period: Late Iron Age –Early Baekje

Description

Very intensively occupied site, with 85 houses identified throughout multiple stratigraphic levels. The village was located on an alluvial plain next to a tributary of the Han River. The assemblage was dominated by plain earthenwares, but also contained decorated greywares. Evidence of both metalworking and pottery-making has been identified.

Relevant Excavation Reports

Central Institute of Cultural Heritage (2010) *Namyangju Janghyeon-ri Site*, Central Institute of Cultural Heritage: Seoul/Daejeon

- Jangjidong

Location: 37.39262, 127.24196

Period: Late Iron Age – Early Baekje

Description

Partial excavation of a larger village located on alluvium next to a tributary of the Han River. Assemblage was primarily a mix of plain earthenware and decorated greywares.

Relevant Excavation Reports

Gyeonggi Cultural Foundation (2010) *Gwangju Jangjidong Settlement Site*, Gyeonggi Cultural Foundation: Suwon

- Mabukdong

Location: 37.29321, 127.10734

Period: Early Baekje

Description

Large village made up of three housing clusters. In total 72 houses and 10 post-structures have been excavated. Non-local pottery, primarily from the southeastern part of Korea, was relatively abundant here. The assemblage was made up mainly of greywares, including a minority of stylized serving vessels. Metal production and pottery-making evidence was also uncovered.

Relevant Excavation Reports

Gyeonggi Cultural Foundation (2009) *Yongin Mabukdong Settlement Site*, Gyeonggi Cultural Foundation: Suwon

Giho Culture Heritage Research Center (2015) *Report on the Excavation of Mabuk-dong Site, Yongin*, Giho Culture Heritage Research Center: Anseong

- Misa-ri

Location: 37.57116, 127.20833

Period: Late Iron Age – Early Baekje

Description

Very large village uncovered by an excavation covering a strip of land over 1km in length. Five housing clusters may be identified, relatively sparsely spaced; 39 houses in total. A dry field system and 41 post-structures were also unearthed. Pottery making and metalworking debris was also in evidence. Assemblage was primarily made up of decorated greywares,

including a minority of stylized serving vessels, but plain earthenwares were also present.

Relevant Excavation Reports

Institute for the Excavation of Misa-ri Prehistoric Site/Gyeonggi Provincial Public Development Company (1994) *Misa-ri Volume 1*, Institute for the Excavation of Misa-ri Prehistoric Site: Seoul

Institute for the Excavation of Misa-ri Prehistoric Site/Gyeonggi Provincial Public Development Company (1994) *Misa-ri Volume 2*, Institute for the Excavation of Misa-ri Prehistoric Site: Seoul

Im, B., Choi, E., Kim, C., Song, W. (1994) *Misa-ri Volume 3*, Institute for the Excavation of Misa-ri Prehistoric Site: Seoul

Im, H., Choi, J., Im, S., Oh, S. (1994) *Misa-ri Volume 4*, Institute for the Excavation of Misa-ri Prehistoric Site: Seoul

Yoon, S., Lee, H. (1994) *Misa-ri Volume 5*, Institute for the Excavation of Misa-ri Prehistoric Site: Seoul

- Seoku-ri

Location: 37.21429, 127.07653

Period: Early Baekje

Description

Small village located next to a tributary of the Anseong River. Settlement includes two housing clusters, multiple post-structures, and a large dry field. Finds include a relative abundance of glass beads and a high proportion of stylized serving greywares. In some pits whole deformed pots or intentionally broken pots were deposited. Both pottery-making and metalworking debris was found at multiple points on the site.

Relevant Excavation Reports

Gyeonggi Cultural Foundation (2007) *Hwaseong Seoku-ri Settlement Site*, Gyeonggi Cultural Foundation: Suwon

- Yangsu-ri

Location: 37.55111, 127.32179

Period: Late Iron Age

Description

Village site located on alluvium next a section of the South Han River. Three housing clusters from the main settlement were excavated, while another small house cluster over 1km away has also been found; 27 houses found in total. The assemblage was balanced between plain earthenware and greywares, while metalworking evidence was identified in the main village.

Relevant Excavation Reports

Son, B., Lee, I., Moon, J. (2008) *Excavation Report of Sangseokjeong Village, Yangsu-ri, Yangpyeong, Gyeonggi Province (Iron Age)*, Seongkyoonkwan University Museum: Seoul

Hamlet Sites

- *Bojeong-ri*

Location: 37.30342, 127.09765

Period: Early Baekje

Description

A cluster of seven houses situated on a steep hillside near a tributary of the Anseong stream. Preservation was poor and many features highly degraded, but one house did have a black burnished vessel.

Relevant Excavation Reports

Gyeonggi Cultural Foundation/Gijeon Cultural Research Centre (2005) *Rescure Excavation of Yongin Bojeong-ri Site*, Gijeon Cultural Research Centre: Suwon

- *Byeolle*

Location: 37.64834, 127.12198

Period: Early Baekje

Description

Seventeen houses split between two clusters each located on the slopes of low hills/ridges.

Relevant Excavation Reports

Hanbaek Cultural Research Institute (2012) *Namyangju Byeolle Site II*, Hanbaek Cultural Research Institute: Seoul

- *Deokhyeon-ri*

Location: 37.76249, 127.39626

Period: Late Iron Age – Early Baekje

Description

Hamlet made up of three houses on alluvium next to a tributary of the North Han River. Assemblage primarily plain earthenware, but some decorated greyware. The presence of agate and glass beads is notable.

Relevant Excavation Reports

Noh, H., Jeong, W., Yoo, C., Cha, W. (2007) *The Excavation Report of the Deokhyeon-ri Site, Gapyeong*, Hallym University Museum: Chuncheon

- *Dongpangyo*

Location: 37.39692, 127.11113

Period: Late Iron Age – Early Baekje

Description

Twenty-nine houses in four well-spaced clusters, each located on the slopes of low hills near a tributary of the Han River. Preservation was poor and so finds were not abundant.

Relevant Excavation Reports

Korea Institute of Heritage (2009) *The Report of Excavation Site at East Pan-gyo, Sungnam*, Korea Institute of Heritage: Seoul

- *Gilmyeong-ri*

Location: 37.94233, 127.27925

Period: Late Iron Age

Description

One very large house situated in a mountain valley near to a tributary of the Imjin River.

Relevant Excavation Reports

Choi, J., Ha, M., Hwang, B., Choi, M., Yoo, Y. (2003) *Pocheon Gilmyeong-ri*, Sejong University Museum: Seoul

- *Gogeumsan*

Location: 37.22880, 126.97966

Period: Late Iron Age – Early Baekje

Description

A cluster of three houses and one post-structure located at the bottom of a shallow slope on the Hwaseong plain. The hamlet was within approx. 1km of the metal production site of Kiandong.

Relevant Excavation Reports

Im, H., Kim, S., Lee, J. (2002) *Hwaseong Gogeumsan Site*, Seoul National University Museum: Seoul

- *Gongse-ri*

Location: 37.24594, 127.12285

Period: Late Iron Age – Early Baekje

Description

A cluster of five houses on a low hill-slope near a tributary of the Anseong River.

Relevant Excavation Reports

Central Institute for Cultural Research (2005) *Yongin Gongse-ri Site*, Central Institute for Cultural Research: Seoul/Daejeon

- *Gugal-ri*

Location: 37.27356, 127.12489

Period: Early Baekje

Description

A group of 12 houses situated on the slope of a low hill near a tributary of the Anseong Stream. There is a probable kiln located on the slope, but preservation was poor.

Relevant Excavation Reports

Gyeonggi Cultural Foundation/Gijeon Cultural Research Centre (2003) *Yongin Gugal-ri Site*, Gijeon Cultural Research Centre: Suwon

- *Gwangseok-ri*

Location: 37.81988, 126.98155

Period: Late Iron Age – Early Baekje

Description

Small cluster of seven houses and one post-structure located in a small mountain valley in the northern part of the Han River basin.

Relevant Excavation Reports

Korea Research Institute of Military Heritage (2012) *The Excavation Report of Yangju*

Gwangseokri Site, Gyeonggido, Korea, Korea Research Institute of Military Heritage: Seoul

- *Gwanyangdong*

Location: 37.40508, 126.96456

Period: Early Baekje

Description

Eleven houses in four separate clusters spread across the slope and base of a low hill near a tributary of the Han River. Clusters were each situated around 150-200m apart.

Relevant Excavation Reports

Korea Institute of Heritage (2012) *The Report of Excavation Site at Gwanyang-dong, Anyang*, Korean Institute of Heritage: Hanam

- *Highway 45*

Location: 37.51576, 127.45132

Period: Late Iron Age – Early Baekje

Description

A single house on a low hill next to the Han River.

Relevant Excavation Reports

Choi, I. (2008) *Archaeological Sites within the Construction Zone for National Highway No. 45 between Yeoju and Yangpyeong*, Korean Research Institute for the Ancient Environment: Yeongi, Chungcheong

- *Jigeumdong*

Location: 37.63041, 127.16525

Period: Late Iron Age – Early Baekje

Description

A small cluster of six houses located on the slope of a low hill near a tributary of the Han River.

Relevant Excavation Reports

Ha, M., Hwang, B., Kim, J., Moon, C. (2008) *Namyangju Jigeumdong*, Sejong University Museum: Seoul

- *Maha-ri*

Location: 37.18145, 126.94685

Period: Early Baekje

Description

Cluster of three houses on a hillside in Hwaseong. Most significantly, this small hamlet is associated with a group of Baekje period burial mounds.

Relevant Excavation Reports

Yi, S., Kim, S-n. (2004) *Maha-ri Mound Tombs*, Seoul National University Museum: Seoul

Kim, S-n., Kim, J. (2005) *Hwaseong Maha-ri Baekje Houses*, Seoul National University Museum: Seoul

- *Mangweoldong*

Location: 37.57561, 127.19147

Period: Late Iron Age – Early Baekje

Description

Two small clusters of houses each located on the crests of nearby low hills overlooking the Han River.

Relevant Excavation Reports

Korea Institute of Heritage (2008) *The Report of Excavation at Mangweol-dong Gusan, Hanam City*, Korea Institute of Heritage: Seoul

- *Minlakdong*

Location: 37.74390, 127.09434

Period: Early Baekje

Description

Cluster of three houses at the base of a hill. Likely presence of a millet field associated with the site detected via phytoliths.

Relevant Excavation Reports

Choi, M., Lee, S., Choi, J. (1996) *Uijeongbu Minlakdong Site*, Seoul National University Museum: Seoul

- *Nakyangdong*

Location: 37.75136, 127.10953

Period: Late Iron Age – Early Baekje

Description

Hamlet of five houses located in part of a small mountain valley to the northern part of the Han River watershed.

Relevant Excavation Reports

Korea Cultural Heritage Foundation (2013) *Uijeongbu Nakyangdong-Minlakdong Site*, Korea

Cultural Heritage Foundation: Seoul

- *Namyangdong*

Location: 37.20858, 126.82522

Period: Early Baekje

Description

A hamlet with six houses split into two clusters situated in a small valley. The valley in question is near the western coastline.

Relevant Excavation Reports

Hanbaek Cultural Research Institute (2014) *Hwaseong Namyangdong Site II*, Hanbaek Cultural Research Institute: Seoul

- *Shindoshi*

Location: 37.63229, 126.64023

Period: Late Iron Age – Early Baekje

Description

Two small clusters of houses located on a low hill-slope near the Han River estuary; one cluster of four and one cluster of two houses with two post-structures. Some evidence of

metalworking was also identified.

Relevant Excavation Reports

Korea Institute of Heritage (2012) *The Report of Excavation at Gimpo Hangang New City Site I*, Korea Institute of Heritage: Hanam

- *Suji*

Location: 37.31775, 127.09091

Period: Early Baekje

Description

Small cluster of six houses located in a small valley near a tributary of the Han River. Assemblage includes a high relative proportion of stylized greyware serving vessels, primarily from a structured deposit where such vessels were placed on the surface and covered with soil. Relatively high concentrations of spindle whorls were discovered. Jade and glass beads were also identified.

Relevant Excavation Reports

Seo, G., Yoo, B., Lee, N., Oh, S., Lee, M., Kim, S. (1995) *Excavation Report of Yongin Suji Area 2*, Hanshin University Museum: Osan

Lee, N., Kwon, O-Y., Cho, D., Lee, D. (1998) *Baekje Houses at Yongin Suji*, Hanshin University Museum: Osan

- *Unyangdong*

Location: 37.65621, 126.68529

Period: Late Iron Age

Description

A cluster of three houses located next to the Han River Estuary.

Relevant Excavation Reports

Hangang Institute of Cultural Heritage (2013) *Unyang-dong Site II, Gimpo*, Hangang Institute of Cultural Heritage: Bucheon

- *Wadong-ri*

Location: 37.72793, 126.76105

Period: Late Iron Age – Early Baekje

Description

A hamlet and pottery production site that was located next to a tributary of the Han River. The main area of settlement included 17 houses and nine post-structures. The assemblage was predominantly made up of decorated greywares, although some plain earthenwares were also found.

During the Early Baekje Period, on a low hill around 1km away from the main house group, a pottery production site with two kilns was operating.

Relevant Excavation Reports

Gyeonggi Cultural Foundation (2010) *Paju Wadong-ri Site II*, Gyeonggi Cultural Foundation: Suwon

Gyeonggi Cultural Foundation (2010) *Paju Wadong-ri SiteI IV*, Gyeonggi Cultural Foundation: Suwon

Gyeonggi Cultural Foundation (2011) *Paju Wadong-ri Site III*, Gyeonggi Cultural Foundation: Suwon

- *Wanglim-ri*

Location: 37.19469, 126.94554

Period: Early Baekje

Description

Fifteen houses and three post-structures in three different residence clusters situated on the hill-slopes of a small valley in Hwaseong. Metalworking evidence was also identified.

Relevant Excavation Reports

Choi, B., Kim, S., Yoo, E. (2004) *Hwaseong Wanglim-ri Site*, Sungsil University Museum: Seoul

Kwon, O-Y., Choi, Y., Lee, E., Sim, H., Kim, H., Jeong, N., Kang, J. (2011) *Rescue Re-Excavation of Hwaseong Wanglim-ri Baekje Site II*, Hanshin University Museum: Osan

Jungbu Institute for Archaeology (2012) *Excavation Report of Wangnim-ri Norijaegol I Site, Hwaseong,* Jungbu Institute for Archaeology: Anyang

- *Yangchon*

Location: 37.64681, 126.62883

Period: Late Iron Age – Early Baekje

Description

A series of small house clusters across a low slope located near the Han River estuary. One cluster dates to the Late Iron Age while three others dated to Early Baekje. The majority of the assemblage, which was dominated by decorated greywares, was located in just one of the later clusters.

Relevant Excavation Reports

Korea Institute of Heritage (2013) *The Archaeological Report of Yangchon*, Korea Institute of Heritage: Hanam

- *Yeongdeok-ri*

Location: 37.27284, 127.09367

Period: Late Iron Age – Early Baekje

Description

A cluster of three houses situated on a low hill near a tributary of the Anseong River.

Relevant Excavation Reports

Gyeonggi Cultural Foundation (2010) *Yongin Yeongdeok-ri Site*, Gyeonggi Cultural Foundation: Suwon

Production Sites

- *Dangha-ri*

Location: 37.18632, 126.94611

Period: Late Iron Age – Early Baekje

Description

One house/workshop associated with a series of pits used for levigation or clay processing. Slag and burnt soil or clay was also discovered deposited in pits.

Relevant Excavation Reports

Yi, S., Kim, S. (2000) *Hwaseong Dangha-ri Site I*, Soongsil University Museum/Seoul National Univesrity Museum: Seoul

Kwon, O-Y., Kim, T. (2004) *Hwaseong Dangha-ri Site II*, Hanshin University Museum: Seoul

- *Gajae-ri*

Location: 37.15018, 126.91889

Period: Late Iron Age – Early Baekje

Description

Four kilns and one probable workshop located on a shallow slope. Wasters from patterned greyware and large greyware storage vessels were found within the kilns.

Relevant Excavation Reports

Kwon, O-Y., Lee, H., Lee, M. (2007) *Excavation Report on the Kiln Site of the Proto-Three Kingdoms Period of Gajae-ri, Hwaseong*, Hanshin University Museum: Osan

- *Hyeonhwa-ri*

Location: 36.98346, 126.91710

Period: Early Baekje

Description

One climbing kiln with greyware wasters found inside.

Relevant Excavation Reports

Chungbuk University Research Centre for Prehistoric Culture (1996) Pyeongtaek Hyeonhwa-ri Site, Chungbuk University Research Centre for Prehistoric Culture: Seoul

- *Kiandong*

Location: 37.22135, 126.98183

Period: Late Iron Age – Early Baekje

Description

A site with four or five smelters in evidence. Dense debris from both former surface level

and in pits, including slag deposits, blast pipe fragments, and charcoal waste. Blast pipes appear to have been made in the same way as those of Lelang tiles and pipes.

Relevant Excavation Reports

The National Museum of Korea (2014) *Iron Production site in Gian-dong, Hwaseong*, The National Museum of Korea: Seoul

- *Nongseo-ri*

Location: 37.21924, 127.08594

Period: Late Iron Age – Early Baekje

Description

Four rising kilns associated with a workshop and waste pits. In the kilns were greyware wasters.

Relevant Excavation Reports

Giho Culture Heritage Research Center (2009) *Report on the Excavation of Nongseori Site in Yongin*, Giho Culture Heritage Research Center: Anseong

- *Sohadong*

Location: 37.43980, 126.88328

Period: Early Baekje

Description

One kiln and associated workshops/houses on top of a low hill near a tributary of the Han River. Within the kiln and houses were both smaller greyware serving and storage vessels, and black burnished pottery.

Relevant Excavation Reports

Lee, S. (2008) *Gwangmyeong Sohadong Site*, Research Centre of Korean Ancient Environment: Yeongi-gun

- *Yeoweoldong*

Location: 37.51152, 126.80115

Period: Late Iron Age – Early Baekje

Description

A dry field system accompanied by one house and one post-structure.

Relevant Excavation Reports

Kim, A., So, S., Yoon, M., Kang, T. (2009) *Bucheon Yeoweoldong Site*, Korea Institute of Heritage: Seoul

Appendix 2: Thin Section Preparation

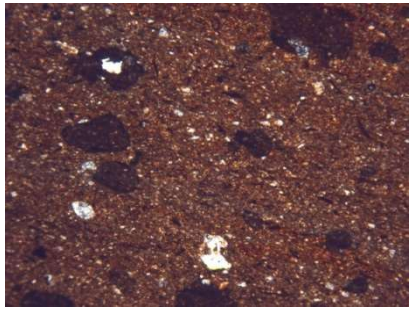
Slide Preparation

Black burnished pottery samples for petrographic analysis were prepared by two different specialists using two different methods. Despite the different methods used the resulting thin sections were all mounted on glass slides and ground to 30µm for analysis.

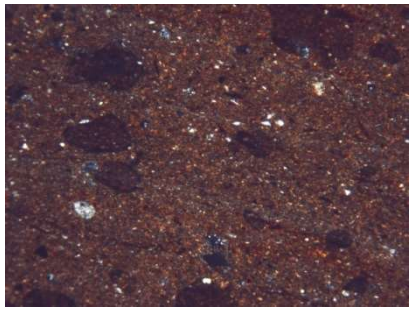
The nine samples from Pungnab Fortress were prepared in the Charles McBurney Laboratory for Geoarchaeology, University of Cambridge by Dr. Tonko Rajkovaca. After making a fresh section with a circular saw, the sherds were impregnated in epoxy resin and mounted on glass slides. Samples were then ground to 100µm using a Brot thin section machine. The slide was itself then mounted with resin onto a polished glass slide, reentered into the machine, and ground to 30µm (taking the original slide and 70µm of sample off).

The remaining 13 slides were made in the private laboratory of Dr. Patrick Quinn using the standard method for preparing ceramic thin sections. As above, a section is cut and the sample impregnated with epoxy resin, the section is then hand polished to a flat surface using water and silicon carbide (SiC) powder to be mounted onto a glass slide. The section is then ground to 30µm using both a grinding wheel and further hand polishing, confirming the thickness via examination of the thin section under cross-polarized light (XP) with a polarizing light microscope, whereby quartz will display characteristic first-order grey and white interference colours at 30µm.

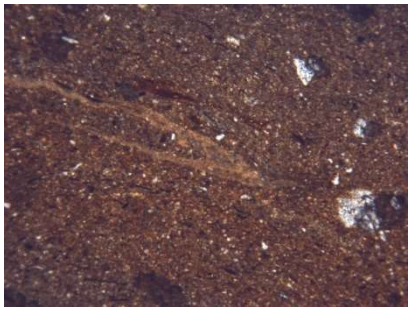
Appendix 3: Thin Section Microphotographs



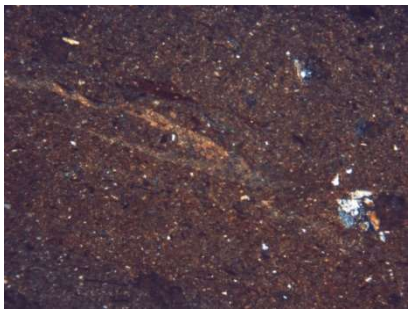
PN1 PPL x40



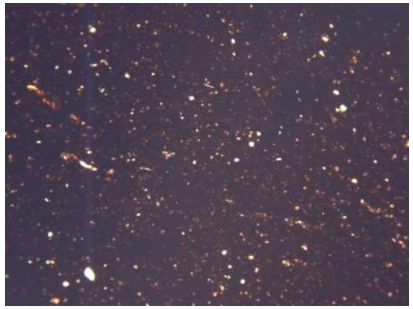
PN1 XP x40



PN2 PPL x40

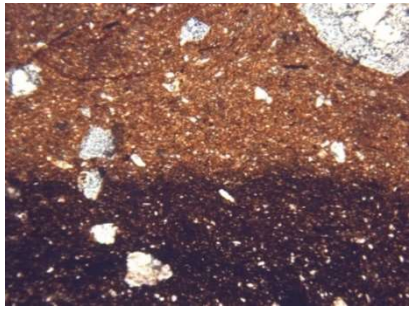


PN2 XP x40



PN3 PPL x40

PN3 XP x40



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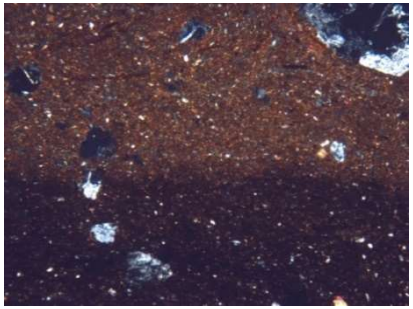

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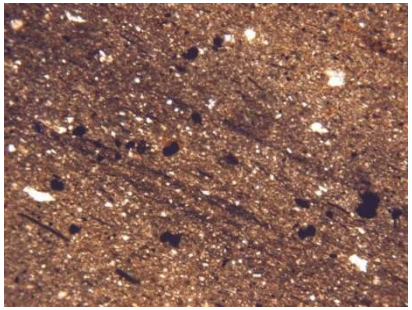

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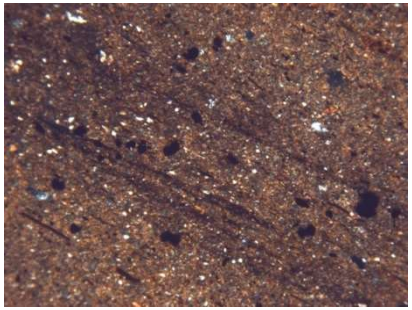
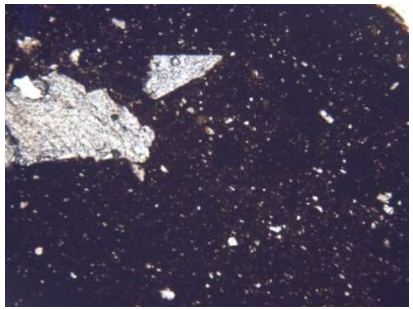


PN5 XP x40

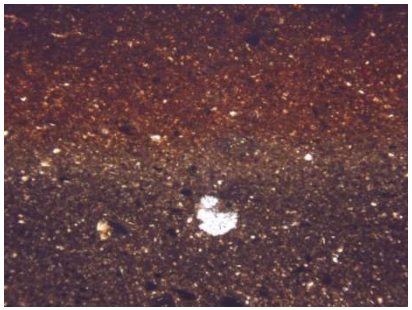


PN6 PPL x40

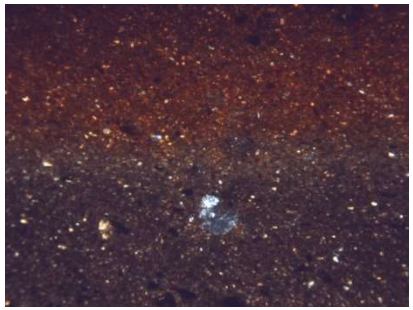
PN6 XP x40

PN7 PPL x40

PN7 XP x40



PN8 PPL x40



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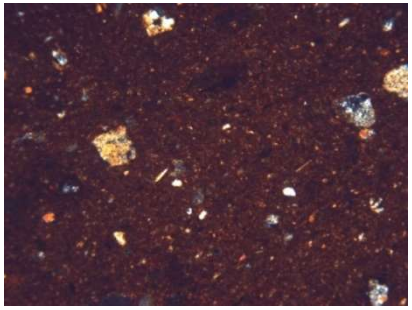
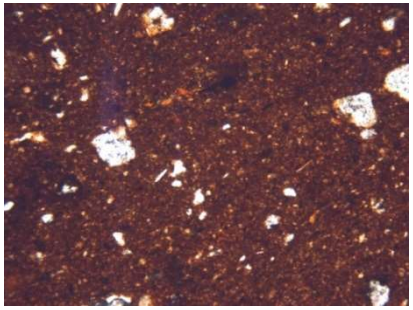
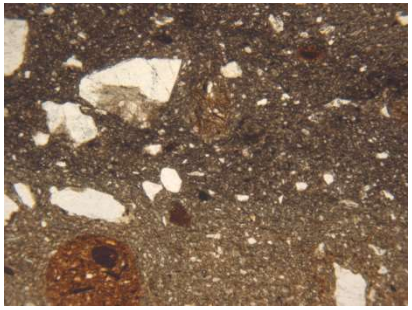


PN9 PPL x40



PN9 XP x40



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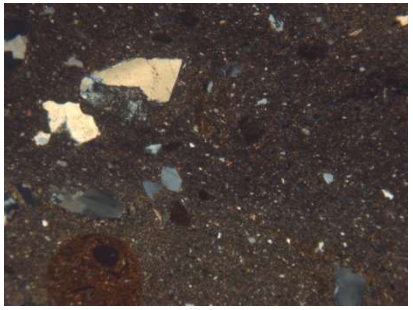
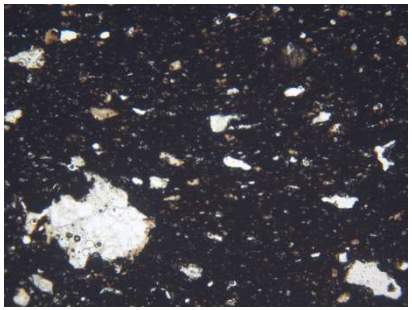
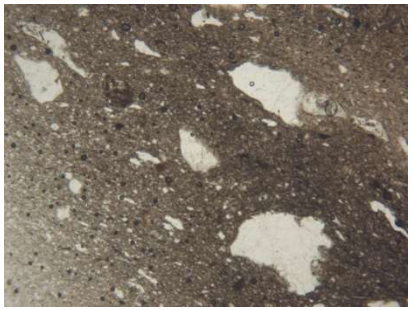


MC1 XP x40



MC2 PPL x40

MC2 XP x40



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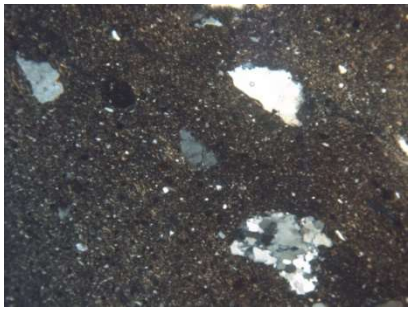
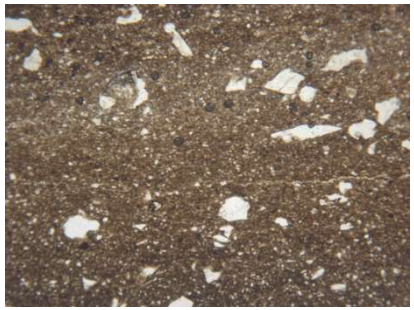


MC3 XP x40



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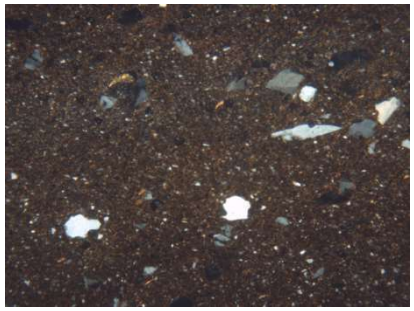

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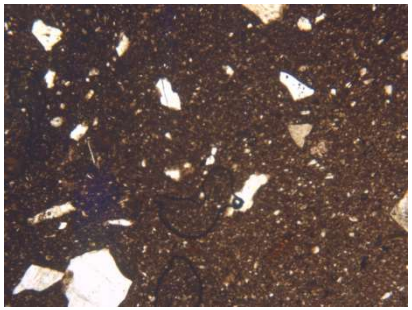
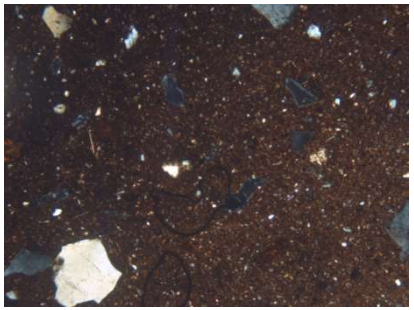
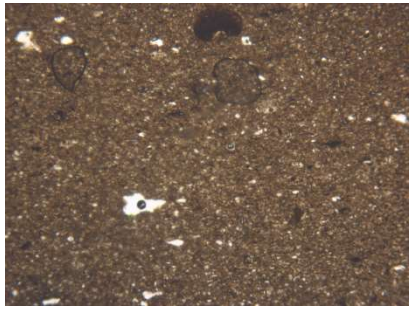


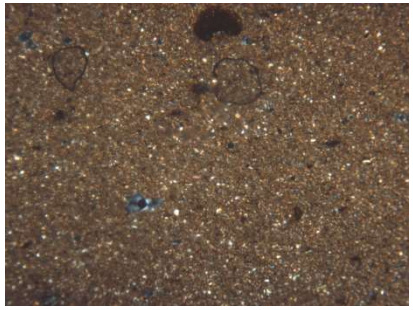
GR2 PPL x40



GR2 XP x400



GR4 PPL x40



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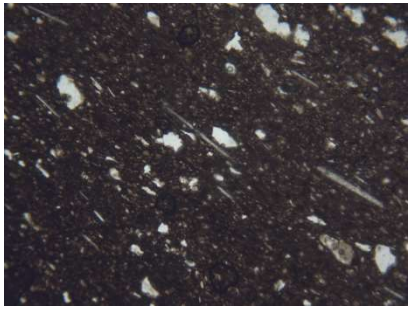

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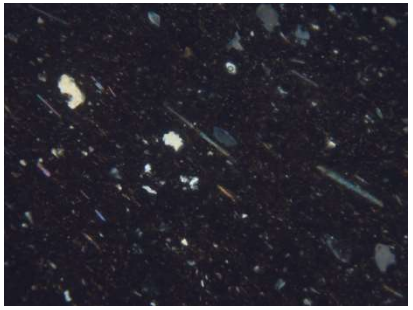
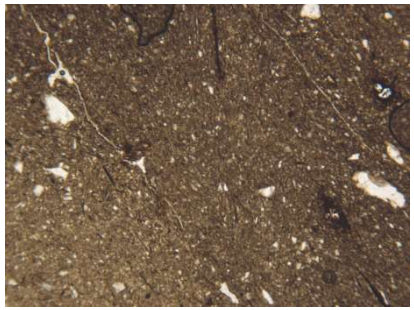


GR6 XP x40



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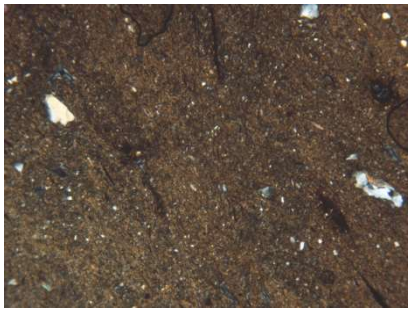
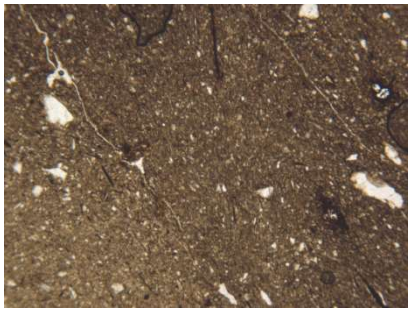
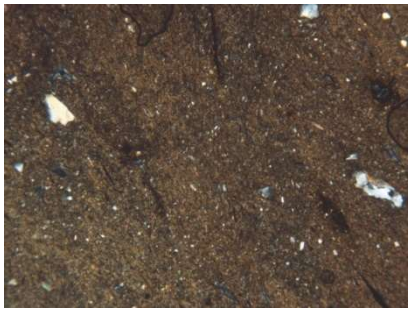


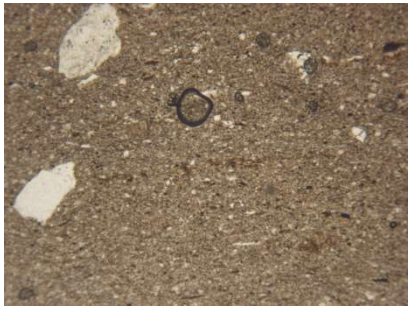
MS1 XP x40



MS2 PPL x40



MS2 XP x40



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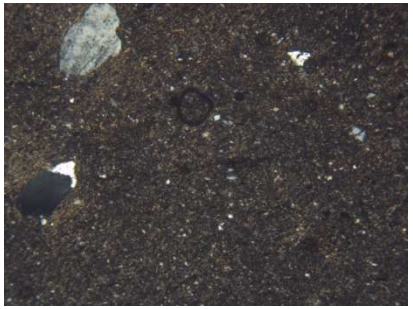

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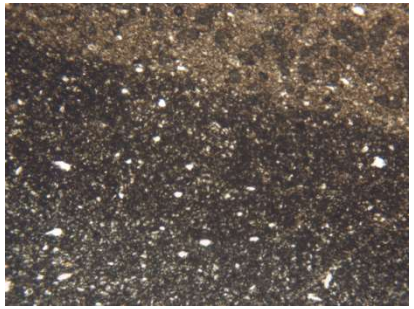
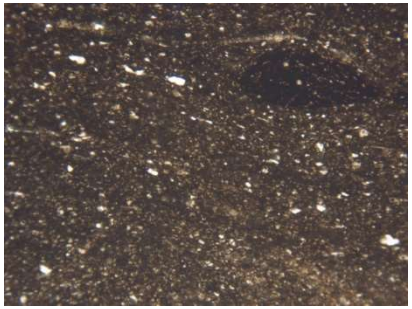


JW2 PPL x40

JW2 XP x40



JW3 PPL x40

JW3 PPL x40

Appendix 4: Geology of Korea, the Han River Basin, and the Hwaseong Region

The Basic Geology of Korea, the Han River Basin, and the Hwaseong Region

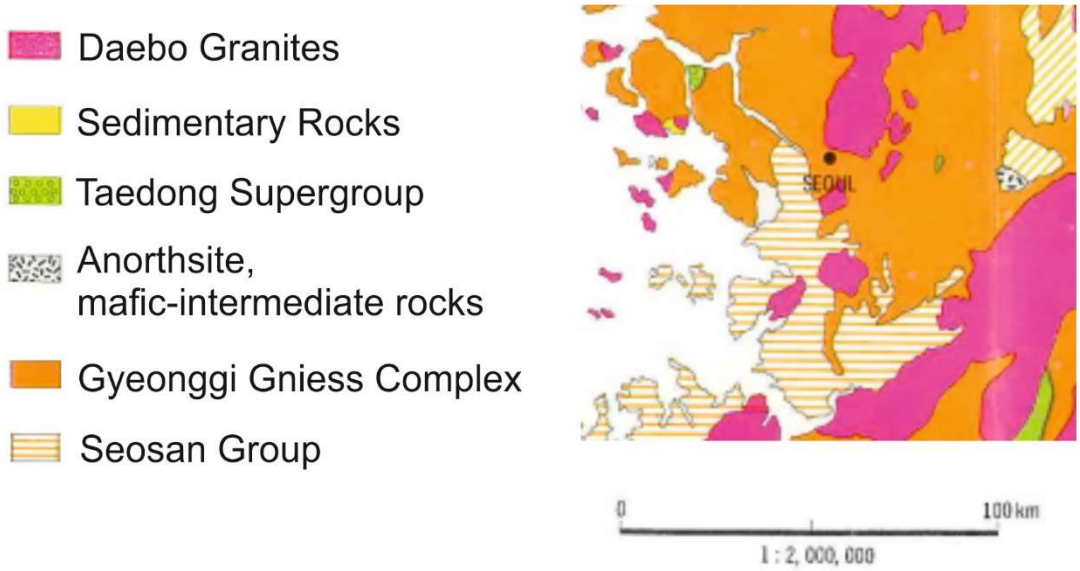


Figure: Geology of the thesis' study area; the Han River basin and Hwaseong region (modified from D-S. Lee, 1988).

The Korean Peninsula's foundational geology is primarily made up of archaeozoic pre-Cambrian gneisses and schists. Around the Han River Basin the Gyeonggi-Gniess Complex is the primary base geology (see Figure). This complex is made up by various types of gneiss but with some smaller pockets of biotite chlorite schist, limestone, and quartzite. In the south and southwest of the area in question is the Seosan Group (see Figure), mainly composed from biotite sericite schist, iron-bearing quartzite, quartz schist, and migmatites.

Later sedimentary and igneous formations lie on top of these metamorphic strata, with significant outcroppings of granites across the peninsula, derived from Triassic-Early Cretaceous tectonic activity. These granites include the Daebo granites of the Han River and wider central region of Korea (see Figure). For more details see D-S Lee (1988).

Appendix 5: INNA Dataset

Sample	Al	Na	K	Ca	Fe	Sc	Ti	V	Cr	Mn	Co	Ni
KOR-JW3	105620	6948	18927	5125	32595	19.77	5967	134.31	121.11	170.38	11.97	47.37
KOR-PN7	93728	8863	19215	6636	32995	15.69	5857	103.07	106.42	316.46	9.25	32.12
KOR-PN8	100790	8256	16226	6231	43363	17.89	5488	135.14	105.91	275.48	13.02	43.96
KOR-PN3	105080	7081	14134	5458	36451	17.47	5758	119.83	130.67	258.10	9.43	33.91
KOR-GR1	81743	5874	17977	3232	29291	13.24	4892	109.39	96.45	188.16	7.36	-0.32
KOR-GR2	85964	7026	22131	3418	34669	12.88	4701	93.43	78.87	216.26	9.28	49.21
KOR-GR4	90608	10408	19033	3649	35614	14.80	5743	98.96	97.12	169.71	8.61	34.31
KOR-GR5	99560	7780	21936	2864	44935	17.25	5775	116.98	124.20	140.83	8.22	25.07
KOR-GR6	103610	8428	23131	3387	29801	13.80	5042	79.32	92.71	227.83	13.89	54.15
KOR-MC1	94219	6262	16648	9226	30248	15.43	4839	109.61	109.65	311.28	10.68	54.96
KOR-MC3	99914	7638	18698	4530	31148	16.87	5624	124.34	106.74	169.76	7.55	15.28
KOR-MS1	115730	6270	21500	2816	40833	20.98	5957	145.60	134.96	185.12	16.73	77.81
KOR-MS2	107280	6245	17488	2753	36543	18.37	6164	136.57	140.76	127.41	9.89	42.75
KOR-PN1	96887	7835	18459	6375	50883	17.07	5268	115.20	119.73	306.94	20.21	46.05
KOR-PN2	99267	7371	16893	5753	41153	17.62	5381	118.97	117.50	293.34	15.92	52.25
KOR-PN4	96858	9954	18849	6471	22751	14.44	4535	84.11	91.76	204.10	6.66	26.02
KOR-PN5	95010	7534	16798	5984	48955	17.30	4964	114.88	108.29	889.41	25.22	43.47
KOR-PN6	89865	7561	15538	5716	33814	16.62	5052	105.69	120.29	281.86	11.14	39.75
KOR-PN9	93091	6070	15956	3342	31296	16.15	5679	104.41	115.56	172.63	11.17	48.01
KOR-MJ1	102120	5928	16256	4951	37980	18.40	5408	118.77	120.60	174.39	10.22	34.74
KOR-MC2	98623	7861	22892	4327	46713	15.59	5584	115.32	85.54	296.38	13.00	48.29
KOR-JW2	105990	6918	19439	4491	34383	19.12	6351	142.12	112.01	167.27	12.53	46.89

Elemental concentrations (parts per million) of black burnished pottery samples from aluminum to nickel.

Sample	Zn	As	Br	Sb	Rb	Sr	Cs	Ba	La	Sm	Nd	Ce
KOR-JW3	102.21	11.06	2.19	1.37	140.36		11.30	719.51	54.16	9.17	49.97	110.44
KOR-PN7	65.42	6.00	2.44	0.62	144.29	206.51	7.48	1144.00	45.87	7.12	38.18	91.98
KOR-PN8	93.17	16.33	1.19	1.24	116.12	125.03	7.61	712.99	46.39	8.70	38.44	92.85
KOR-PN3	84.59	9.85	3.36	0.62	129.12	194.46	10.45	1156.80	69.78	9.60	55.37	133.66
KOR-GR1	57.51	9.13	4.38	0.78	137.34	107.35	8.02	635.80	42.04	6.60	32.07	83.37
KOR-GR2	89.93	9.24	3.31	0.35	169.14	124.06	8.85	886.35	41.83	6.54	30.09	83.85
KOR-GR4	81.90	6.20	2.99	0.53	127.84	96.91	7.21	839.79	39.41	6.27	28.26	80.85
KOR-GR5	58.94	10.37	9.13	0.56	149.18		8.48	624.10	40.05	6.68	32.13	83.73
KOR-GR6	64.34	6.09	4.17	0.41	153.85		8.12	766.26	62.75	8.94	46.34	111.97
KOR-MC1	73.98	8.24	6.90	0.78	117.42	273.63	6.43	1471.20	43.34	7.16	27.87	90.91
KOR-MC3	57.50	11.12	8.66	0.84	111.35	152.24	7.41	1450.10	48.63	7.80	38.67	90.51
KOR-MS1	136.86	7.50	1.82	0.95	130.45	107.65	8.20	703.18	60.53	10.12	47.67	122.60
KOR-MS2	82.35	9.92	7.09	0.97	89.10		4.42	563.06	42.64	7.73	42.28	91.87
KOR-PN1	124.99	11.66	1.29	0.80	151.09	245.96	8.71	1096.60	45.73	7.83	39.71	95.97
KOR-PN2	82.65	7.30	1.11	0.76	144.44	129.92	7.77	1052.70	54.29	9.08	43.20	107.19
KOR-PN4	66.89	6.00	5.11	0.77	144.53	175.14	7.67	873.91	55.55	8.19	47.13	103.67
KOR-PN5	177.12	13.52	1.02	0.48	146.25	191.63	7.80	954.22	52.25	8.61	43.29	109.93
KOR-PN6	107.24	7.94	2.03	0.78	129.19	198.24	7.92	1159.00	51.75	8.42	42.20	102.52
KOR-PN9	82.42	8.04	1.06	0.76	121.42		7.67	720.09	49.96	8.85	36.17	99.99
KOR-MJ1	74.66	9.14	9.75	0.47	107.38	145.06	7.45	1157.30	45.06	7.43	38.99	92.49
KOR-MC2	67.37	14.50	-0.01	1.06	159.23		10.86	719.30	67.46	9.67	52.93	124.87
KOR-JW2	75.40	11.38	1.63	1.26	139.95		11.48	720.36	54.71	9.16	42.41	109.96

Elemental concentrations (parts per million) of black burnished pottery samples from zinc to cerium.

Sample	Eu	Gd	Tb	Dy	Yb	Lu	Hf	Ta	Th	U
KOR-JW3	1.72	10.18	1.06	6.30	3.48	0.5	6.02	1.42	22.19	4.14
KOR-PN7	1.33	9.10	0.91	5.71	2.83	0.4	5.72	1.56	17.52	3.38
KOR-PN8	1.65	10.44	0.99	6.41	3.28	0.5	5.70	1.23	16.67	3.61
KOR-PN3	1.82	14.28	1.16	6.59	3.36	0.5	4.46	1.78	25.82	6.76
KOR-GR1	1.30	11.99	0.87	5.15	2.79	0.4	7.05	1.38	16.28	5.53
KOR-GR2	1.20	7.22	0.76	4.89	2.75	0.4	5.89	1.58	18.87	3.74
KOR-GR4	1.14	9.97	0.82	4.44	2.65	0.4	6.01	1.49	16.86	3.23
KOR-GR5	1.21	3.91	0.78	4.74	2.75	0.4	5.74	1.56	19.60	3.29
KOR-GR6	1.67	7.04	1.08	6.38	3.12	0.5	6.57	2.05	19.65	6.10
KOR-MC1	1.40	7.48	0.84	5.54	2.71	0.4	6.14	1.13	16.14	3.04
KOR-MC3	1.64		0.91	5.78	3.04	0.4	6.04	1.26	16.80	3.72
KOR-MS1	2.09	10.29	1.16	7.20	3.93	0.6	5.36	1.28	21.14	3.57
KOR-MS2	1.44	4.93	0.95	5.64	3.15	0.4	7.51	1.41	17.63	3.58
KOR-PN1	1.54	9.32	0.93	5.72	3.07	0.4	5.45	1.27	17.67	3.34
KOR-PN2	1.77	5.96	1.09	6.45	3.58	0.5	5.45	1.21	18.37	3.58
KOR-PN4	1.49	10.03	0.95	6.27	3.35	0.5	6.94	2.07	19.26	7.19
KOR-PN5	1.62	9.43	1.10	5.49	3.17	0.5	5.35	1.22	19.57	3.29
KOR-PN6	1.59	5.70	0.93	5.18	3.11	0.5	5.77	1.25	18.30	3.34
KOR-PN9	1.55	8.23	0.96	6.04	2.99	0.5	6.29	1.28	14.90	3.12
KOR-MJ1	1.41	6.56	0.96	5.78	3.00	0.4	5.03	1.30	16.34	3.43
KOR-MC2	1.84	9.49	1.29	6.84	3.72	0.6	8.35	1.59	19.92	4.87
KOR-JW2	1.72	9.03	1.15	6.60	3.64	0.5	6.27	1.39	21.11	4.12

Elemental concentrations (parts per million) of black burnished pottery samples from europium to uranium.

Appendix 6: Principal Components Analysis Factor Loadings

Loading Factors of First Three Principal Components

Loading Factors

	Principle Component		
	1	2	3
Al	.757	-.209	-.307
Na	-.148	.478	.179
Ca	.070	.032	.615
Fe	.317	-.475	.419
Sc	.685	-.638	-.104
Ti	.431	-.466	-.485
V	.534	-.732	-.197
Cr	.389	-.678	-.171
Mn	.163	.095	.897
Co	.548	-.260	.607
Zn	.392	-.354	.589
As	.338	-.377	.155
Sb	.530	-.295	-.354
Ru	.046	.617	.417
Cs	.458	.382	.164
Ba	-.138	-.021	.564
La	.832	.485	.057
Sm	.951	.107	.031
Nd	.876	.294	-.052
Ce	.907	.302	.114
Eu	.945	.032	.052
Tb	.931	.170	.038
Dy	.873	.164	-.114
Yb	.944	.094	-.093
Lu	.910	.201	-.103
Hf	-.130	.297	-.476
Ta	-.015	.835	-.309
Th	.645	.344	.008
U	.252	.803	-.263

Factor loadings showing the associations between factors and respective chemical concentrations.